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Reducing Bureaucracy and Increasing Efficiency:

Designing and Validating a Digital Tool to Record Development Activities and Derive Improvement Measures at Mercedes-Benz AG

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Abstract

Facing intense internal and external pressures, Mercedes-Benz must optimize Research & Development efficiency. Current systems track resource allocation but overlook operational inefficiencies. This work project designs and validates a digital adaptation of the lean 'Tätigkeitsstrukturanalyse' (activity structure analysis) to close this transparency gap. Expert interviews confirm that a short-cycle digital snapshot can effectively quantify administrative waste. However, transparency is merely the prerequisite for an optimized workflow. The findings dictate that the tool's success relies on a mandatory framework that triggers action and measurable change. Ultimately, the tool transforms subjective employee feedback into actionable data, utilizing a digital governance concept to enable lean development speed.

Keywords:

R&D Efficiency, Lean Management, Bureaucracy Reduction, Digital Tool Validation, Resource Steering, Automotive Industry

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List of Abbreviations

Battery-electric vehicles …….…… BEV

Feedback for Effective & Efficient Development ……..…… FEED

Mercedes-Benz …….…….…… MB

Mercedes-Benz Operating System ……..…… MB.OS

Methods-Time Measurement …….…… MTM

Next Level Performance …….……..…… NLP

Original Equipment Manufacturer …….……...……..…… OEM

Project Lead …….……...……..…… PLE

RD Steering Team …….……...…… RD/PX

Research Questions …….……...…… RQ

Research & Development …… R&D / RD

Rückmeldesystem ……...…… RMS

Tätigkeitsstrukturanalyse …….…… TSA

United States of America …….…….……...…… U.S.A.

Volatile, Uncertain, Complex, and Ambiguous ……..……...…..…… VUCA

Value Stream Mapping …….……...…… VSM

Plan-Do-Check-Act ……..…… PDCA

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1. Introduction

Over the past decade, the automotive industry has experienced fundamental disruptions; the traditional paradigms of vehicle design, development, and delivery were radically transformed (Röhr et al. 2025). Although the origins of this transformation trace back further, the launch of the Tesla Model S in 2012 acted as a definitive catalyst (Berman 2012). The structural migration towards battery-electric vehicles (BEV), combined with comprehensive digitalization of products, manufacturing, and customer touch points, is further compounded by two macro-economic disruptions that challenge the legacy automotive industry.

First, the reemergence of geopolitical protectionism, sharply driven, and illustrated by the recent implemented import tariffs in the United States of America (U.S.A.). A study showed that 25% tariffs could reduce German car output by nearly 6%, while making cars in the U.S.A. is either more expensive or reducing the profit margin (Hassan 2025). Although a deal between the European Union and the U.S.A was reached that settled on 15% import tariffs in August 2025, it is still incentivizing localized production in North America (European Commission 2025).

The second shift is the changing competitive landscape, most notably in China, Mercedes-Benz's largest single market. The competitive frontier has moved, with 129 electric vehicle brands currently active in China. AlixPartners expects that only 15 of these brands will survive 2030, showcasing an overcrowding of the market, which is fueling an intense price war, ultimately also hitting German Original Equipment Manufacturers (OEMs) (AlixPartners 2025). Chinese OEMs now operate with cost structures up to 40% lower and production costs 30-40% lower than those of legacy (German) OEMs, all while setting benchmarks in terms of digital features (Ragonnaud 2024). This led to the quadrupling of market share of Chinese OEMs in Europe since 2020 (Röhr et al. 2025).

The enormous headwinds result in less revenue and margin headroom for Mercedes-Benz, and increased tariff friction, as well as intensified competition, have collided with a difference in development pace and technical innovation. The CEO of Mercedes-Benz (MB), Ola Källenius summarized the situation in an Interview: “Our industry is facing rain, hail, storms, and snow all at once. Manufacturing cars has never been tougher” (Hubrik, Scheppe, and Källenius 2025).

These effects are clearly reflected in Mercedes-Benz’s financial performance. In Q3 of 2025 focusing specifically on the cars division, the adjusted Return on Sales for Q1-Q3 registered 5.7%, representing a substantial decline from 8% in the same period in 2024. The financial deterioration continues: Earnings Before Interest and Taxes dropped 58.6% Year-to-Date, and net profit declined by 50.3% in Q1-Q3 from €7,806 million in 2024 to €3,878 million in 2025, underscoring the urgency of required strategic adjustments (Mercedes-Benz Group 2025).

External pressures that triggered financial turmoil, combined with internal constraints, such as hierarchical structures and bureaucratic decision-making, created a clear need for change at Mercedes-Benz. To address this, MB initiated the ‘*Next Level Performance*’ (NLP) program with five work streams to tackle financial, cultural, product, and sales changes. Within stream two, called ‘Costs and Investments,’ the clear goal is: reduce investments, as well as variable and fixed costs. One aspect is reshaping the fixed cost base without layoffs. To achieve this, voluntary severance packages as buyouts were proposed to nearly all MB employees and around 4,000 employees left the company with this program (Scheppe 2025).

This reduction in workforce has fundamentally altered the operational reality: it has raised the bar on productivity per developer. Achieving faster development cycles with the reduced workforce is a primary challenge towards a successful future for Mercedes-Benz.

To manage this new reality of limited resources, especially in the Research & Development (R&D/RD) department, a new team implemented the ‘RD Resource Steering Model.’ This

model focuses on accurate time-tracking and resource allocation to ensure that development teams are working on the right projects. This model successfully tracks ‘where’ developer resources are booked, creating a form of transparency and steering opportunities within development projects. Yet, it is structurally limited in identifying inefficiencies and waste because it lacks the answer to ‘how’ effectively or efficiently the development hours were spent.

This lack of qualitative and quantitative insights contributes to the dilemma within the R&D at Mercedes: to deliver more, faster, at higher quality, and with less developer resources. The challenge of ‘doing more with less’ requires creative solutions, whereas one solution is rooted in the continuous improvement cycle, Plan-Do-Check-Act (PDCA) (Lean Enterprise Institute 2022; Isniah, Purba, and Debora 2020). MB’s lack of transparency into daily inefficiencies that slow teams down hinder improvement measures. The lack of transparency to ‘Check’ the current state of efficiency prevents the ‘Act’ phase in eliminate waste.

To bridge this transparency gap, MB looked to Lean principles. Identifying and removing waste (jap.: Muda) is the core of lean (Ohno 1978; Womack and Jones 1997). A tool which is often used to make workflows visible is the German ‘Tätigkeitsstrukturanalyse’ (TSA), translated as activity structure analysis, which systematically records and analyzes work activities to distinguish between value-adding and non-value-adding tasks. While TSAs have been performed at Mercedes-Benz using Microsoft Excel spreadsheets or by hand, they suffer from high manual effort, administrative burden, and a lack of transferability.

Therefore, to solve the problem of missing transparency without creating new bureaucracy, a new approach is required. The thesis validates the concept for a digital lean-based tool: The Feedback for Effective & Efficient Development (FEED) App. This tool adapts the TSA concept towards a digital, anonymous, and fast activity tracking tool to give employees and their managers feedback on inefficiencies and potential improvement levers.

1.1 Research Goal and Questions

The objective of this work project is to design, validate, and refine an IT tool to successfully record development activities at Mercedes-Benz AG and derive improvement potentials, effectively closing the loop between project resource steering and actual operational efficiency.

Research Question 1 (Usability): How should a digital tool be designed to ensure high adoption rate and low effort for developers, while meeting strict compliance standards?

Research Question 2 (Transparency): Can a digital snapshot generate valid and comparable insights into daily inefficiency?

Research Question 3 (Actionability): How can the generated transparency be effectively translated into concrete improvement measures to increase the value-adding development time?

1.2 Structure of the Thesis

The structure of the thesis is as follows: Section two presents a comprehensive review of the literature, critically evaluating existing research. Section three establishes theoretical groundwork for the tool and the validation framework. Section four outlines the methodology for validating the tool concept. Section five presents the findings of the interviews. The sixth section discusses these findings, exploring their implications to literature and Mercedes-Benz, as well as the limitations of the study. In the final, seventh, chapter key insights are summarized, and a future outlook is created.

2. Literature review

A central thread running through the review is the role of transparency: efficiency and effectiveness can be improved once organization processes are made visible and measurable (Berggren and Bernshteyn 2007; Benito, Guillamón, and Ríos 2021; Richard et al. 2009).

2.1 Organizational Efficiency and Bureaucracy

Organizational efficiency is widely recognized as a prerequisite for both short- and long-term profitability and sustainability (Almatrooshi, Singh, and Farouk 2016; Lin and Orvis 2016; Inegbedion et al. 2020). In a comparative review focused on Qatar, organizational efficiency is defined as the capacity to achieve objectives with minimal resources across the value chain (Al-Shaiba et al. 2019). Yet there is no clear definition and more broadly, there is an absence of a uniform indicator set, complicating the selection of robust performance metrics to measure and compare efficiency across sectors (Fysikopoulos et al. 2014; Pinprayong and Siengthai 2012; O'Donnel and Boyle 2008). This lack of consensus motivates multi-level frameworks (e.g. process and factory level indicators) but also leaves 'efficiency' open to interpretation. Individual employees can best understand if their activities are effective (doing the right things) and or efficient (doing things right) (Yan et al. 2023; Yates, Gough, and Brazil 2022; Fysikopoulos et al 2014; O'Donnel and Boyle 2008). Consequently, the self-assessment can be seen as a straight-forward way of getting a first understanding of efficiency within an organization (Yan et al. 2023).

The optimization of efficiency, regardless of how it is tracked, is closely linked to the effectiveness of bureaucracy and the resulting speed of an organization. Bureaucracy has historically been both a stabilizing force and a potential constraint. It is commonly attributed to the French economist Vincent de Gournay and theorized by Max Weber (Albrow 1970). He is associated with Weberian bureaucracy and denotes it as an organizational arrangement that formalizes rules, specifies roles, and institutionalizes hierarchical authority to deliver predictability and fairness (Drechsler 2020). These features stabilize organizational output quality, limit arbitrariness, and have underpinned the construction of modern administrative capacities (Woelert and Stensaker 2024; Du Gay 2000; Harari 2025).

However, the same features that guarantee reliability can also generate rigidity and administrative overhead that reduce responsiveness and innovation (Duncombe, Miner, and Ruggiero 1997; Mintzberg 1979). To reconcile this paradox, scholars emphasize that bureaucracy must balance control with flexibility to function effectively in fast-changing environments (Albrow 1970; Woelert and Stensaker 2024; Du Gay 2000; Sager and Rosser 2021). This balance is particularly critical in R&D environments, where innovations within a highly bureaucratic system are often incremental changes, so-called 'micro-innovations' (Wiseman 2017). They can be interpreted as precursors to structured framework like Lean and Agile, which formalize continuous improvement and adaptability (Veiga et al. 2016; Arendsen et al. 2014; Herd and Moynihan 2019; Giest and Samuels 2022). Therefore, bureaucracy is not always a constraint on efficiency yet with the right transparency mechanisms, it can evolve into a more enabling structure (Burns and Stalker 1994; Cosh et al. 2010; Almazrouei et al. 2024).

2.2 Process optimization frameworks and activity tracking

Transforming bureaucracy and stability from a constraint into an enabler of organizational efficiency, specific frameworks can be applied. To achieve organization-wide efficiency and continuous improvement, the literature points to a toolkit spanning lean, agile, and data-enabled process management. In short, lean emphasizes efficiency (doing things right) while agile emphasizes effectiveness (doing the right things), and digitization provides transparency serving as the foundation (Sudit 1984; Mouzas 2006; Llopis-Alvert et al 2020; Shah et al. 2007; Dingsøyr et al. 2012).

Lean is rooted in the Toyota Production System by Taiichi Ohno and developed towards a management philosophy. Taking ideas from production, like eliminating waste into a management context by aligning all activities to achieve customer value (Ohno 1978; Womack and Jones 1997; Ferreira and Silva 2023). Lean is best understood as a holistic business system rather than a toolbox, spanning supplier management, just-in-time flow, workforce capability,

leadership and many more (Hines et al. 2004; Shah et al. 2007). Concrete lean techniques like the 5 S's (workplace organization and safety), Value Stream Mapping (visualizing end-to-end workflow), Just-in-Time (minimizing inventory queues) or Hoshin Kanri (strategy deployment) illustrate principles that can be operationalized (Tortorella et al. 2020; Kumar et al. 2022).

Agile management frameworks complement lean by increasing adaptability in volatile, uncertain, complex, and ambiguous (VUCA) contexts. A detailed review in software-intensive organizations identifies Scrum, Kanban, and Extreme Programming as the most discussed methods, with growing hybridization in large programs (Dingsøyr et al. 2012; Serrador and Pinto 2015). Scrum for example organizes work into time-boxed sprints with defined roles (Product Owner, Scrum Master, Developers), events, and artifacts to deliver increments of value (Dong et al 2024). To scale these effects and build multi-team projects Scaling Agile Frameworks like the Scaled Agile Framework or Scrum-of-Scrums can be used (Theobald, Schmitt, and Diebold 2019). While this is a process of change for many established companies, it is already implemented in the software development of the Mercedes-Benz Operating System (MB.OS) (Hansen 2023; Östberg 2025).

Crucially, in theory agile is already beyond software and often coexists with traditional phase-gate controls. In hardware systems, agile practices are spreading into cross-disciplinary R&D teams. Audi, for example, is leading a modular process to improve collaboration and continuous improvement with a 'Systems Scrum Master' (Heine and Palm 2023). The digital transformation amplifies both lean and agile by connecting value chains, shortening feedback cycles, shifting business models, and promoting a data-centric environment (Llopis-Albert et al. 2021). Especially in the R&D sector, these process optimization principles can have immense positive impact on speed, cost of development, and adaptability.

Before Lean principles can be applied to reduce waste, the waste itself must be identified. Tying the digital, lean practices, and learning back to workflow optimization, the identification of

such inefficiencies and ineffectiveness is essential to define and implement corrective measures (Wiegand, Franck, and Nutz 2004).

Several established instruments support rigorous time tracking and transparency. At the macro level, Value Stream Mapping (VSM) provides an end-to-end view of the material and information flow, from customer order to delivery. Every process step can be classified as value-adding or non-value-adding and targeted for waste elimination (Haefner et al. 2014). Closer to the shop floor, the REFA 'Arbeitsstudie' serves as a micro lens on real work. Tasks and work systems are observed, measured, assessed, and documented to derive standard methods and times (Bundesministerium Des Inneren 2024; REFA Consulting 2023). Complementing both is Methods-Time Measurement (MTM), an engineering-oriented approach that the decomposes manual activities into micro-motions and assigns predetermined times ("Methods-Time-Measurement (MTM)" 2006). Taken together, VSM, REFA, and MTM provide a layered toolkit, from system flow to workplace method, that strengthens the measurement and management of efficiency.

2.3 Theoretical Predecessor: Tätigkeitsstrukturanalyse

While VSM, REFA and MTM offer robust frameworks for standardized production environments, their application in high-variability R&D settings is limited. These methods are often too rigid for the dynamic nature of R&D work. A more suitable instrument, rooted in lean principles, is the German '*Tätigkeitsstrukturanalyse,'* translated as activity structure analysis. The TSA systematically records, analyzes, and distinguishes an employee's work activities between value-adding and non-value-adding tasks. Unlike simple time tracking, the objective is not to measure duration, but to classify activities according to their contribution to the organization's value creation (Goetz and Friederich 2020; Nallusamy and Ahamed 2017; Shou et al. 2019). The method is grounded in the lean concept of waste elimination (Goetz and Friederich 2020; Wiegand 2017; TrainingsManufaktur 2024). Activities are categorized,

assessed and then can be either eliminated, delegated, or optimized. There are many lean tools such as the Eisenhower Matrix that build on the results of a TSA to create impact with actions like 'Do, Plan, Eliminate or Delegate' in case of the Eisenhower Matrix. However, the critical baseline for all these improvements is transparency (Berggren and Bernshteyn 2007; Benito, Guillamón, and Ríos 2021; Richard et al. 2009).

The TSA provides a conceptual bridge to time-tracking systems that not only capture hours worked while also generating insights into an indication of the value of these worked hours. The connection to efficiency gains of the TSA lays the foundation of the work project. Additionally, TSAs based on Excel sheets have been done at Mercedes-Benz. Templates were shared around the company, and the workers council was familiar with the concept. That also gave another boost to showcasing TSA as a baseline for the new tool development. A detailed insight into a TSA at Mercedes-Benz can be found in Appendix A. Yet, the TSA also comes with inconveniences like being on paper or Microsoft excel and with a lot of manual inputs.

These limitations establish the theoretical gap this work project addresses: While the TSA provides the correct methodological approach for waste identification, its traditional analog execution makes it difficult to scale in a modern, digitalized R&D environment. Consequently, the practical challenge lies not in inventing a new metric or a completely new tool, rather in transferring the established logic of the TSA into a scalable, digital artifact that fits the specific company needs and governance ecosystem of Mercedes-Benz.

3. Conceptual Framework: The FEED-App

Building on the theoretical foundation of TSA and specific needs of MB, this chapter outlines the conceptual framework of the proposed solution. It details the existing ecosystem, identifies the functional gap, and introduces the FEED-App as digitalized, adapted TSA.

3.1 Mercedes-Benz RD Steering Ecosystem

As part of the NLP project, the ‘RD Resource Steering Model’ was initiated to optimize resource allocation. In the process, several structural and functional challenges were identified by external consultants and internal interviews from senior managers (L3) to Vice-Presidents (L1). These challenges included overbooking of unapproved content, a recurring mismatch between content and resources, and limited transparency in resource booking and utilization.

To address this, the RD Steering Model was established with two distinct but complementary pillars: Governance and Steering. For the governance part the precise time-recording represents a legal and accounting necessity, ensuring causation-based allocation in line with compliance standards to activate research projects for tax benefits and government grants (Pointl 2010; § 255 Abs. 2 HGB). This is handled via the existing and updated ‘Rückmeldesystem’ (RMS). The steering side also requires accurate time-tracking data to provide the transparency required to analyze, prioritize, and steer teams effectively. Complementing data quality, with dashboards for line managers and Project Leads (PLEs) makes resource utilization visible and highlights deviations in order to mediate resource conflicts on a project level.

While the RMS successfully tracks ‘where’ a developer’s time is booked (per research project) it fails to identify ‘how’ the time is spent. The system operates on the assumption that every hour booked to a project is value-adding, blinding management from friction and administrative overhead within a project (Haefner et al. 2014). This confirms that the existing ‘bureaucratic’ but necessary steering tool (RMS) lacks the transparency required to identify inefficiencies. This transparency gap was confirmed during two internal pilots conducted at MB.OS Base Layer and Electrified Drive System department. The pilots revealed that ‘Muda’ is inherent in every developer’s daily activities and generated levers for potential efficiency measures, to increase core development time by up to 9.1% per week. To achieve the productivity gains, a complementary tool focusing specifically on the efficiency of the activity was needed.

3.2 The FEED-App Concept

To close this gap, the concept of the FEED-App was developed as a digital synthesis of the theoretical frameworks discussed. It operationalizes the subjective self-assessment, within a short-cycle feedback loop (agile approach), all while applying the waste identification logic of a TSA (Llopis-Alvert et al 2020; Dingsøyr et al. 2012; Yates, Gough, and Brazil 2022).

FEED has a dual goal for management and developers. On the one hand, the *management* seeks qualitative and quantitative transparency of inefficiency as well as clear measures to increase core development time. On the other hand, *Developers* gain an anonymous feedback opportunity to surface overload, unnecessary tasks, waste, and double-reporting, to refocus on their actual job of development on drive-systems, software, and other activities.

The FEED-Apps operational design and workflow is unlike the permanent time-tracking in RMS. It is a cycle that creates a snapshot of the developers' activities, once per year per team. A cycle spans around ten working days and must include at least six participants (data privacy). Before the start of the FEED, the line managers can make final adjustments to categories, duration period, and participants (only within his or her own hierarchy line).

The participants log activities and respective times in pre-set categories that include core development (project), non-core tasks, and additional categories, based on the lean principles of value vs non-value-adding activities (Nallusamy and Ahamed 2017; Shou et al. 2019). A detailed list and explanation of the categories can be found in Appendix B. Crucially, after documenting activity and time, participants need to assess efficiency and effectiveness with two straight-forward 'Yes/No' questions (Was this activity Effective / Efficient?). This self-assessment is documented in the lean literature as a simple but effective way to identify trends and feedback (Yates, Gough, and Brazil 2022; Ritchie and Dale 2000; Wiegand 2017). If at least one question is answered with a 'No,' a short free-text description is required including

the specification of the activity, cause for inefficiency, and potential improvement measure. The input creates a temporary administrative burden that serves as a calculated investment of waste, a necessary short-term cost to identify and eliminate larger, systemic inefficiencies in the long run. A mock-up of the input screen can be found in Appendix C.

Data privacy and security are an integral part of the FEED-App concept. To ensure adoption and compliance in a highly regulated German work environment, privacy is central to the design. All data that is inputted in the front-end and saved to the back-end is pseudonymized, and no personal information (name, input department, or e-mail) can be traced back. This is to prevent any form of personalized analysis and no performance assessment.

After the inputs over the 10-day period are submitted, the analysis phase for the line manager begins. The FEED-App generates specific outputs: an aggregated dashboard and an anonymized excel list for potential deep dives into detailed explanations (Preliminary Dashboard in Appendix D). The line manager should select measures on the biggest improvement fields and then further analyze these categories in the excel to find trends and establish improvement measures.

To create meaningful change, the feedback needs to be understood and changes implemented. Therefore, three to five priority measures are defined in a discussion with the specific team and the RD Steering Team (RD/PX). The measures can be team internal as well as RD-wide changes. The committed team-internal measures have to be implemented by the team and driven by the line manager. After six months, a follow-up on the implementation of changes is done. An overview of the initial FEED-App approach can be found in Appendix E.

3.3 Validation Framework

Since this work project focuses on the development and validation of the FEED-App rather than statistical hypothesis testing, the concept is evaluated against three core dimensions

derived from the literature and guided by the three Research Questions (RQ). These dimensions define the specific criteria probed during the expert interviews.

Dimension 1 – Usability (Ref. RQ 1): Drawing on the analysis of 'bureaucracy' in section 2.1, a central risk is that another new tool may generate rigidity and administrative overhead. In lean teams, an activity tracking tool that requires excessive manual input becomes Muda (waste) itself, even when its purpose was to identify waste. Therefore, the dimension does not just evaluate 'user friendliness' of the tool, rather focusing specifically on a potential rejection by developers. It probes the trade-off between depth of data required by management and speed of input demanded by users.

Dimension 2 – Transparency (Ref. RQ 2): Traditional efficiency frameworks rely on objective and external observation to ensure data validity. The FEED-Apps concept challenges this by relying on subjective self-assessment over a short snapshot cycle. The validation must determine if sacrificing objective precision for subjective relevance can yield robust transparency for clear management decisions, as prior research linked efficiency gains to transparency (Berggren and Bernshteyn 2007; Benito, Guillamón, and Ríos 2021; Richard et al. 2009).

Dimension 3 – Actionability (Ref. RQ 3): Transparency represents the 'Check' phase of the PDCA cycle described in section 2.2 (Isniah, Purba, and Debora 2020). The final dimension evaluates the mechanism for actual change. It examines what structures are necessary to ensure that the identified waste leads to the 'Act' phase and the tool creates and drives change.

4. Methodology

4.1 Research Design

The work project used a qualitative research design aimed at validating and refining the FEED-Apps concept within the R&D at Mercedes-Benz AG. Given the applied nature of the project,

the research design prioritizes practical feasibility and organizational fit over statistical generalization. The study uses a combined approach of individual interviews to surface requirements and constraints, focus groups (exploratory interviews) to validate the tool, and individual interviews with dedicated experts in problem fields to finalize the tool. Notably, the focus groups were partially integrated into existing operational meeting routines. This strategic embedding was necessary to secure participation of executives. This approach ensured that the validation included critical decision-makers' perspectives while respecting the time constrains of the corporate environment.

4.2 Data collection

Individual interviews established requirements, surfaced risks (usability, transparency, effectiveness), defined adaptations to the FEED-App, added the strategic approach, and clarified specific problems at Mercedes-Benz. The interviews were transcribed with 'MAXQDA,' translated to English with 'DeepL,' and manually checked for errors. Focus groups were conducted in-person and in German. Activities in the focus groups included walkthroughs of workflow, discussion of trade-offs (transparency vs burden), and prioritization of change proposals. This dual approach provides a balanced empirical basis for the tool refinement and validation (Guest et al. 2017; Rabiee et al. 2004; Lambert and Loiselle 2008).

To capture the requirements of the FEED ecosystem, the diverse participants included the Director of Engineering (direct reporting line to Chief Technology Officer), two Senior Managers for Controlling and Finance, as well as two Project Leads (Software and Compact Cars), and a Line Manager. For governance, the workers council, an IT Architect, and two Lean Experts were interviewed.

The mix ensures that the tool was validated for technical feasibility, organizational acceptance, and management relevance. A detailed list of the interview partners and focus groups, including dates, roles, and interview formats, is provided in Appendix F.

4.3 Data Analysis Approach

The interviews were recorded and transcribed (Rädiker and Kuckartz 2019). Focus group sessions were documented via structured notes and verbatim citations when feasible. Analysis followed a pragmatic, qualitative content approach by Mayring and Frenzel (2019). This methodology involves the systematic, rule-guided reduction of complex text material by assigning data segments to specific categories, allowing for a structured evaluation against the defined research dimensions. The analysis followed a hybrid approach, combining deductive and inductive category formation. The main coding frame was derived deductively from the validation dimension of chapter 3 (Usability, Transparency, Actionability). Within this framework, sub-categories were developed inductively from the interview material. A detailed overview of the coded categories and assigned text excerpts is provided in Appendix G. The interview guidelines and transcripts can be found in Appendix H.

5. Findings

To validate and refine the FEED-App concept, individual interviews and focus groups were conducted. The statements from the interviews were categorized to enable a structured evaluation. The following sections present the findings structured according to the research dimensions: Usability, Transparency, Actionability; followed by structural boundaries.

5.1 Insights into Usability and Acceptance (RQ 1)

To validate usability of the tool, the focus was on the line manager and end-users. The core design principle of simplicity was broadly confirmed by the experts, while some adaptations were requested. A central tension emerged regarding granularity of data versus ease of use.

A divergence in requirements was observed regarding category granularity. While the management requested detailed sub-categories to isolate specific activities between initial requirements and additional tasks (Performance Expert), the operational side argued that exceeding a threshold of 7-9 categories would negatively impact user adoption (Line Manager). The consensus reached was to prioritize usability, resulting in the consolidation of 'Training/Absence' into 'Administrative' category to minimize selection complexity.

A critical design risk identified was the potential for compliance gaming, where users might falsify 'Yes' responses to avoid the mandatory free-text entry associated with 'No' answers or a sharing of sensitive, personal, or inappropriate information in the free-text field. To mitigate these frictions while ensuring data quality, the expert panel validated the implementation of a strict word limit and explicit integrity guidelines as proposed by the IT Architect.

One major usability gap was repeatedly highlighted: the absence of a mobile version. While highly desirable from a user perspective, especially for developers conducting test drives away from their desk, a mobile version would substantially increase data flow complexity and development effort. For the first iteration of the FEED-App, a secure desktop-based solution was prioritized, with mobile functionality identified as key item for later iterations.

5.2 Insights into the created Transparency (RQ 2)

Regarding the validity of the data generated by the tool, the experts confirmed that the proposed 'digital snapshot' approach is sufficient for the intended purpose. From a methodological standpoint, the validity of the digital snapshot approach was confirmed as "already relatively good… in order to have a valid database" (Lean Expert).

Experts across functions agreed that a ten-day observation window provides a sufficient database to identify recurring waste patterns and typical recurring meetings and tasks. A permanent logging of activities was deemed unnecessary (Focus Groups 1 and 3).

Across focus groups and interviews, a recurring pattern was that pain points were widely 'known' yet not quantifiable. The FEED-App is and was seen as the tool to measure these issues. "It can make things transparent that are actually already known […]." (Line Manager). A key finding was that the tool's primary transparency value is quantifying the known, rather than discovering new inefficiencies. Experts emphasized that while many inefficiencies are intrinsically known, the tool transforms anecdotal evidence into hard data, thereby legitimizing the need for change or escalation to higher management levels.

The simple questions on effectiveness and efficiency were deemed subjective and still appropriate. For the lean expert "whether something is objective, effective, or efficient is less decisive than the subjective component" (Lean Expert). With clear guidance and a common communicated goal, subjective inisghts can be aggregated to trends of potential improvements.

5.3 Insights into Actions and Uptake of the Output (RQ3)

While the transparency dimension was validated, the most intense discussions focused on the next steps, the mechanism required to translate data into tangible action. There was unanimous agreement, that transparency is a necessary but insufficient condition for the success of the FEED-App, "we have to define a follow-up process" (Lean Expert SW). The tool needs to create its own success story. The consensus was that if the 'Check' does not lead to a visible reduction in waste with 'Act', user acceptance will collapse and the tool will be rejected as 'just another bureaucratic documentation task'. As the Performance Expert stated: "If we prove two or three times that we are not doing anything… the tool will be dead" (Performance Expert). The design of the follow-up process and the allocation of ownership was heavily discussed. One position, particularly from controlling highlighted limited capacity and argued that FEED should primarily generate transparency, complemented by a questionnaire to check whether line managers implemented any changes. In contrast, other experts, especially the PLE Compact

Cars, argued for a more structured process with a team external moderator who challenges the outcomes and supports the team in deriving concrete improvement measures (Focus Group 3).

From these debates, a formalized FEED cycle emerged: 3-5 measurable concrete actions must be defined post-assessment. The experts cautioned that scaling FEED to many teams could create "enormous effort" and the risk that RD/PX, controlling and other supporting teams "become accountants", which underlined the need for a standardized, lean follow-up architecture (Performance Expert, Controlling R&D).

To solve the conflict views on ownership, a hybrid approach was validated: measures are split between team internal actions (immediate implementation) as well as systematic RD-wide changes (escalated to RD Steering Team), ensuring that teams are empowered and obliged to act while structural issues are addressed centrally. In the follow-up process there is also an external moderator present, either from RD/PX or the operational excellence team.

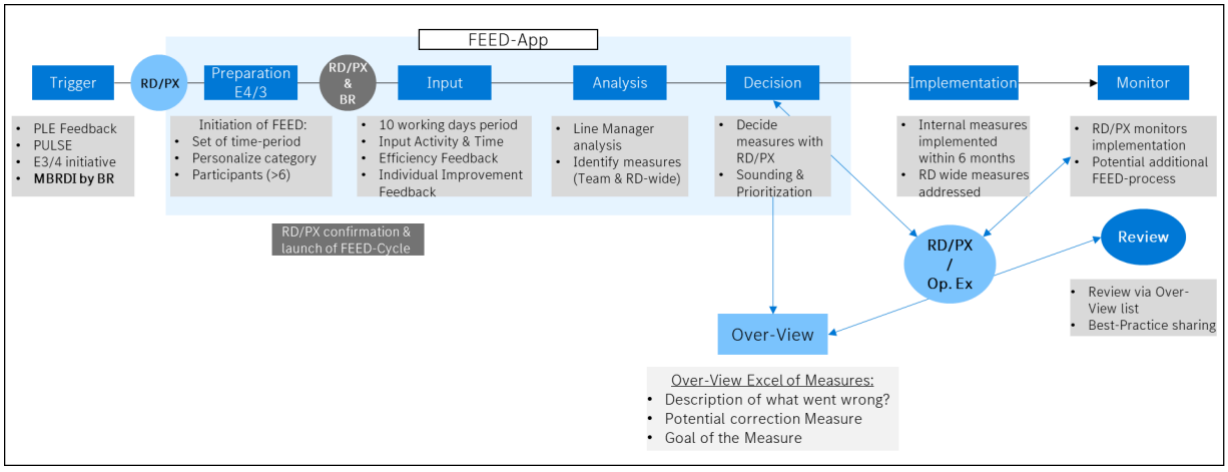

Figure 1: FEED-App process

5.4 Additional insights

Beyond the core research dimensions, the interviews defined operational boundary conditions for the FEED-App. Most notably, the workers council confirmed that anonymity is non-negotiable, enforcing a minimum cohort size of six participants. This constraint dictates that the tool must function purely as a diagnostic instrument for trends, explicitly precluding its use

for individual performance evaluation (Focus Group 2). Crucially, workers council approval is required at the beginning of each FEED cycle, but they do not need or want to be involved in the following steps (IT Architect, Line Manager, Workers Council R&D and IT). Long term storage and RD wide benchmarking was viewed critically, so the current twelve-month deletion period supports the positioning of FEED as a temporary diagnostic instrument rather than a performance archive.

Experts emphasized that usability and acceptance depend strongly on framing and communication (Lean, Performance Expert, Line Manager). Participants need to understand the goal, so that the inputs are taken seriously. FEED was seen as a rare opportunity to provide data to perceived inefficiencies, making the additional effort acceptable "for a limited period of time" (Line Manager). Clear communication is required to ensure that FEED is not perceived as performance evaluation, and rather as a support mechanism for developers (Focus Group 3).

6. Discussion

The chapter contextualizes the findings within the existing body of literature and derives practical implications for Mercedes-Benz, as well as outlines the limitations of the study.

6.1 Theoretical Interpretation

The validation of the FEED-App confirms that the theoretical conflict between bureaucracy (stability) and lean (speed) can be bridged by digitalizing tools and methods within a bureaucratic environment. While the general approach of a digital TSA was validated by experts, the findings offer specific insights that extend the existing literature.

The literature review highlighted the inherent tension in bureaucracy, which can ensure predictability and stability in organizational output, but it can also risk rigidity and administrative overhead, reducing innovation (Drechsler 2020; Woelert, and Stensaker 2024; Mintzberg 1979). The FEED-App findings illustrate a mechanism of enabling bureaucracy to

reduce inefficiency. By formalizing the feedback loop and activity tracking system, itself a bureaucratic approach, the digital tool attacks the rigidities of the system in which it is embedded. The findings indicate the paradox that in large organizations, reducing bureaucracy initially requires *more* structure (e.g., a clear follow-up process in the FEED-cycle) to identify exactly where *less* structure is needed. This confirms that transparency is the prerequisite for an efficient organizational design, even within a bureaucratic framework.

While lean focuses on waste reduction and agile on adaptability, as well as continuous improvement, the FEED-App validates a hybrid approach. The findings regarding 'short cycles' (10 working days) and 'snapshot validity' align with agile principles (Dingsøyr et al. 2012). Simultaneously, the analysis of activities remains a lean approach, based on distinguishing value from non-value adding activities (Ohno 1978; Womack, and Jones 1997). FEED successfully operationalizes this hybrid theory by applying a lean lens to generate transparency within an agile timeframe and follow-up architecture.

Also, the FEED-App represents a shift from the 'classic TSA' to a digital one. A major difference is that in the digital tool, the classification of activities is not reliant on external observation (REFA) or objective time-motion studies (MTM), focusing rather on employee's self-perception (Bundesministerium Des Inneren 2024; REFA Consulting 2023; "Methods-Time-Measurement (MTM)" 2006). This introduces a novel element: the validity of subjective self-assessment. The literature is extended by the focus on subjective self-assessment of effectiveness and efficiency. Even though the determination of need for action is not included in the classic TSA, it aligns with self-assessment research (Yan et al. 2023; Yates, Gough, and Brazil 2022; Ritchie, and Dale 2000). The expert's validation supports this shift, the Lean expert mentions: "Whether something is objective, effective, or efficient is less decisive than the subjective component" (Lean Expert). This suggests that in knowledge work, the employee's

subjective perception of friction is often a more actionable indicator of waste than objective time measurements, as it captures the frustrations that purely quantitative measures miss.

The experts focus on a follow-up process and insist on early, visible success stories. This aligns directly with John Kotter's change management framework, specifically the necessity of generating 'short-term wins' to sustain momentum in a VUCA environment (Kotter 1995). The findings also contextualize 'Perceived Usefulness' within the 'Technology Acceptance Model,' by Davis (1989). In the context of the FEED-App, useful is not only defined by the user interface but by its ability to trigger a tangible organizational reaction (Davis 1989). This extends the theoretical understanding of the TSA. It must function as a reciprocal exchange, where the developers provide data in exchange for the promise of reduced friction and waste in their daily activities. If this 'contract' is broken (i.e., data is submitted and no change occurs), the adoption process fails, confirming the Performance Expert's warning that without action, "[…] the tool will be dead" (Performance Expert).

This reflects a typical 'Principal-Agent Problem', where management may prioritize short-term stability over the effort required to implement changes (Vaubel 2006). To resolve this conflict of interest, the FEED ecosystem enforces an external moderator and a mandatory six-month check-in. These structural safeguards ensure that the 'agent' (line manager) remains accountable, guaranteeing that the developers' investments in transparency are reciprocated.

6.2 Practical Implications for Mercedes-Benz

For Mercedes-Benz, the FEED-App is not merely another IT tool, it can become a strategic instrument to tackle the dilemma of having to do more with less resources due to the macro-economic situation and internal programs like NLP.

Cultural Implications: The implementation of FEED implies a shift from no clear insights about the daily activities of developers to a diagnostic intervention. The practical implication is that

MB must define specific ‘Triggers’ that activate a FEED-cycle, ensuring the tool is used to solve problems rather than to survey and evaluate employees. Based on the findings, these triggers can include data anomalies (inconsistent RMS inputs), performance indicators (missed or late milestones), or sentiment indicators (negative employee feedback in the ‘Pulse Check’).

By linking the tool to these triggers, the organization accepts honest, bottom-up feedback. FEED serves to quantify qualitative problems, transforming anecdotal frustrations like the following: “When I tell him [my manager], I don’t know, how can I prove that we have [problems]” (Line Manager), into hard data. Quantification should provide the necessary leverage to force management into acknowledging and addressing friction that was previously dismissed. Culturally, this implies a move towards radical transparency, where quantification of waste is viewed as a prerequisite for the efficiency required to compete.

Operational Implications: The most critical operational implication is the resource commitment required to close the action gap. The findings confirm that bureaucracy can only be reduced if the organization commits resources to the ‘Act’ phase of the PDCA cycle. This requires MB to define who facilitates the follow-up process. Experts warned against a scenario where ‘responsibility is shifted’ without support (PLE Compact). Therefore, whether it is an internal moderator or a dedicated external team (e.g. RD/PX), these actors must be trained and authorized to challenge the outcome of the FEED within the teams.

Experts warned that without visible benefits, the tool might lose legitimacy. The productive survival of FEED depends on a quick and visible return on invest for the developers. If the input leads to measurable reduction in administrative work, a positive reinforcing feedback loop is created. Conversely, if ‘proven’ waste is ignored, FEED becomes another layer of bureaucracy, which hinders innovation and value creation. Consequently, the practical mandate is to treat the results of FEED as requirement for change and not only as interesting statistics.

Practical Implications: Beyond the organizational and cultural logic, the immediate practical implication is a transition from validation to technical realization. The work project provides a clear sequence of next steps.

The concept must undergo the formal IT development process, including formalizing validated concept with workers council, data security council, and enterprise architects at MB in various committees. Following the approvals, the software development for a minimum viable product (MVP) must commence. In the next step, the roll-out should be started with internal testing of the software, a deployment to the pilot teams to fine-tune governance and follow-up processes, before it can be rolled out across the R&D organization aiming for in Q2 2026.

6.3 Limitations and Future Research

As with most research, the design, the findings, and the resulting interpretation have certain limitations. First, regarding methodological scope, the validation relied on a sample of thirteen experts, including individual interviews and focus groups. While these participants represented critical strategic functions, the restricted sample size implies that specific viewpoints from other operational hierarchy levels or niche departments may be underrepresented. Furthermore, as the data collection was confined exclusively to Mercedes-Benz employees in Germany (not all were German), the findings regarding privacy compliance and direct communication styles reflect a specific cultural and legal environment. Consequently, the transferability of the tool's acceptance logic to international corporations and R&D hubs, such as those in China or the U.S.A., remain a subject for future validation.

Second, a distinction must be drawn between conceptual and operational validation. This research evaluated the design feasibility and acceptance rather than its long-term impact on productivity. As no longitudinal data was available, the study infers potential efficiency gains based on expert assessment rather than empirical proof over the six-month FEED-cycle.

Another limitation of the study was the reliance on management and experts for validation. Future research phases must include a larger cohort of developers (end-users) to verify 'usability.' Management perception of tool usability often differs from the user reality.

Finally, limitations arise from the intrinsic design of FEED-App itself. The reliance on subjective self-assessment, while determined as a strength for identifying friction, introduces potential response biases, such as recency effects, daily mood, or strategic gaming to influence management decisions (Benson 2015; Richard et al. 2009). Additionally, the inherent logic of the 'snapshot', which captures ten working days, limits the validity of the data. This short observation window, even though confirmed by experts, may fail to account for fluctuations or seasonal workload peaks, such as preceding the Start of Production phase or before certification deadlines of a new car are due. This could potentially skew the results and profile of a team.

Addressing these constraints outlines a potential agenda for future research. Subsequent studies should aim to extent the validation through longitudinal quantitative field testing across German and international R&D hubs to empirically verify whether the projected efficiency gains materialize in diverse operational cultures over time.

7. Conclusion

The objective of this work project was to design and validate a digital instrument that can identify and reduce administrative waste within the R&D department of Mercedes-Benz AG. By digitalizing the TSA concept, the study complemented the existing resource steering model.

7.1 Summary of Key Insights

The findings provide direct answers to the three guiding research questions, confirming that a digital transparency tool is viable only when embedded in a governance framework.

Usability – RQ 1: The study concluded that adoption is contingent on radical simplicity. The validation confirmed that administrative burden must be minimized, by for example

consolidating categories. While a mobile solution is desirable for future iterations, a seamless desktop-based version was prioritized for the MVP to ensure immediate impact.

Transparency – RQ 2: The FEED-App successfully closes the transparency gap inherent in the existing RMS. While RMS tracks *where* hours are allocated, FEED reveals *how efficiently* those resources are utilized. The study confirms that a short-cycle snapshot can generate valid data to transform frustration into quantifiable facts, legitimizing interventions, and structural change.

Actionability – RQ 3: Transparency acts as the necessary prerequisite and is the 'Check' phase of the PDCA cycle, but it is insufficient to drive change alone. The central insight is that the tool requires a mandatory governance framework to trigger the 'Act' phase. Without a visible return on time invest for the developers, the tool risks becoming a bureaucratic redundancy. Consequently, success is when the identified waste has a binding effect to achieve actual change by optimizing processes, freeing up time of developers for core development activities.

7.2 Future Outlook

To sustain the impact of the FEED-App, the development roadmap must evolve along two strategic axes: technological evolution and organizational scaling.

Technological Evolution: Future iterations must move beyond manual input by leveraging the Microsoft 365 ecosystem. This includes Outlook integration to auto-populate meeting data and the use of Microsoft Co-Pilot (Artificial Intelligence) to cluster qualitative feedback and suggest automated improvement measures. Furthermore, to capture the operational reality of vehicle testing, a secure Mobile App is a critical next step in usability.

Organizational Expansion: While validated in a vehicle development context, the logic of 'Bureaucracy Reduction' is transferable. Future applications should expand beyond project-based R&D teams to administrative functions (e.g., Sales, Finance, etc.), allowing Mercedes-Benz to benchmark operational friction across the entire corporate value chain.

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Appendix

Appendix A – Tätigkeitsstrukturanalyse at Mercedes-Benz

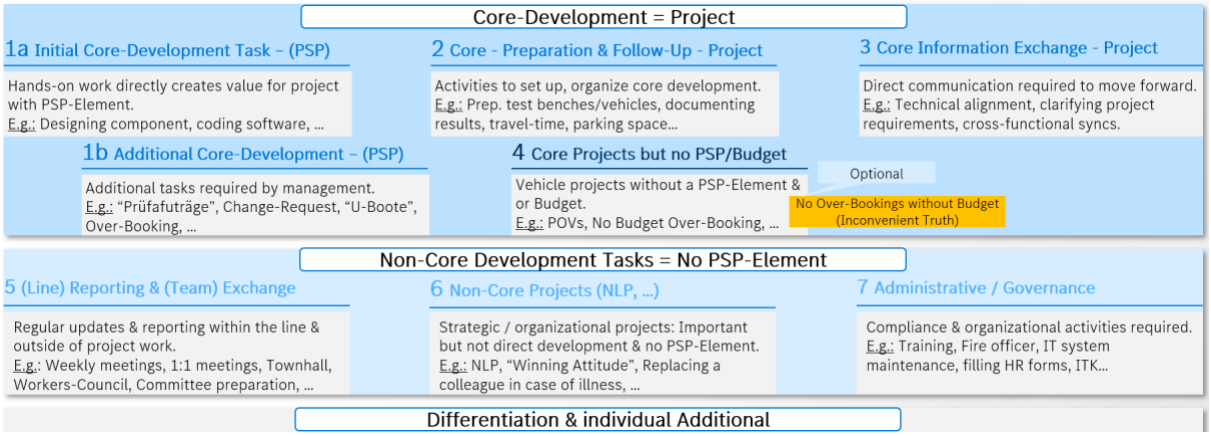
Tätigkeitsstrukturanalyse	Bitte setzen Sie ein "X" in dem Zeitintervall, in dem die Haupttätigkeit beginnt. Nutzen Sie "V", falls Sie als Vertreter arbeiten.																					
Aktivität	6:00	6:15	6:30	6:45	7:00	7:15	7:30	7:45	8:00	8:15	8:30	8:45	9:00	9:15	9:30	9:45	10:00	10:15	10:30	10:45	11:00	11:15	11:30	SUMME in h
Projektarbeit																								0
präventives Lieferantenmanagement (z.B. OSA, PSV, PSM, ICA ...)																								0
Unterstützung Dispo - reaktives LM																								0
Unterstützung KTB'ler - Reklamatin - reaktives LM																								0
Unterstützung KTB'ler - Bemusterung																								0
Unterstützung anderer Bereiche (z.B. zentrales LM, ...)																								0
Abstimmung mit anderen Bereichen (z.B. Planung, Entwicklung, Einkauf, QS, Produktion, Serienmanagement)																								0
Änderungsmanagement (z.B. KAA's, Neuteile)																								0
Lieferantenbesuche (ohne Reisezeit)																								0
Reiseplanung, Abstimmung, Genehmigung, Vorbereitung																								0
Reisezeit																								0
dauerhafte Regeltermine (z.B. Shopfloor Management, ...)																								0
persönliche Entwicklung (Schulung, Bildung, Teamentwicklung, etc.)																								0
Maßnahmenverfolgung																								0
Sonstiges (bitte detaillieren)																								0

Aktivität	11:45	12:00	12:15	12:30	12:45	13:00	13:15	13:30	13:45	14:00	14:15	14:30	14:45	15:00	15:15	15:30	15:45	16:00	16:15	16:30	16:45	17:00	17:15	SUMME in h
Projektarbeit																								0
präventives Lieferantenmanagement (z.B. OSA, PSV, PSM, ICA ...)																								0
Unterstützung Dispo - reaktives LM																								0
Unterstützung KTB'ler - Reklamatin - reaktives LM																								0
Unterstützung KTB'ler - Bemusterung																								0
Unterstützung anderer Bereiche (z.B. zentrales LM, ...)																								0
Abstimmung mit anderen Bereichen (z.B. Planung, Entwicklung, Einkauf, QS, Produktion, Serienmanagement)																								0
Änderungsmanagement (z.B. KAA's, Neuteile)																								0
Lieferantenbesuche (ohne Reisezeit)																								0
Reiseplanung, Abstimmung, Genehmigung, Vorbereitung																								0
Reisezeit																								0
dauerhafte Regeltermine (z.B. Shopfloor Management, ...)																								0
persönliche Entwicklung (Schulung, Bildung, Teamentwicklung, etc.)																								0
Maßnahmenverfolgung																								0
Sonstiges (bitte detaillieren)																								0

Aktivität	17:30	17:45	18:00	18:15	18:30	18:45	19:00	19:15	19:30	19:45	20:00	Bemerkungen:	SUMME in h
Projektarbeit													0
präventives Lieferantenmanagement (z.B. OSA, PSV, PSM, ICA ...)													0
Unterstützung Dispo - reaktives LM													0
Unterstützung KTB'ler - Reklamatin - reaktives LM													0
Unterstützung KTB'ler - Bemusterung													0
Unterstützung anderer Bereiche (z.B. zentrales LM, ...)													0
Abstimmung mit anderen Bereichen (z.B. Planung, Entwicklung, Einkauf, QS, Produktion, Serienmanagement)													0
Änderungsmanagement (z.B. KAA's, Neuteile)													0
Lieferantenbesuche (ohne Reisezeit)													0
Reiseplanung, Abstimmung, Genehmigung, Vorbereitung													0
Reisezeit													0
dauerhafte Regeltermine (z.B. Shopfloor Management, ...)													0
persönliche Entwicklung (Schulung, Bildung, Teamentwicklung, etc.)													0
Maßnahmenverfolgung													0
Sonstiges (bitte detaillieren)													0

TSA Design of Mercedes-Benz – Manually mark activity every 15min with an X on paper or Microsoft Excel.

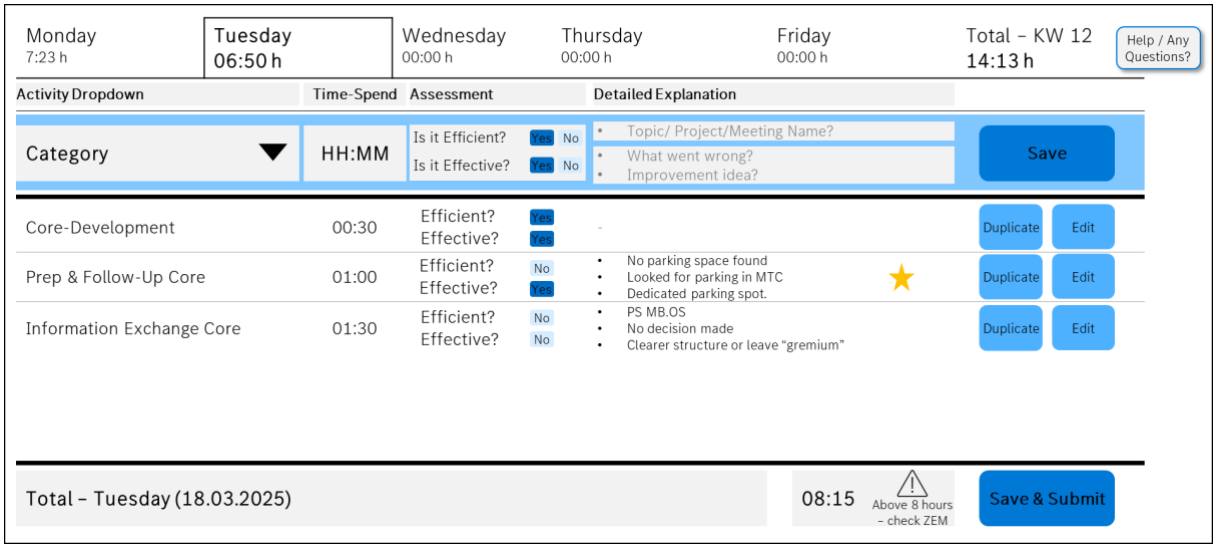
Appendix B – FEED-App Pre-Set Categories



The FEED-App utilizes a standardized categorization framework to ensure data comparability across different teams while allowing for specific operational nuances. The framework distinguishes between core-development (project related) and non-core development tasks. These are the fixed pre-set categories and line managers are allowed a maximum of two additional individual categories.

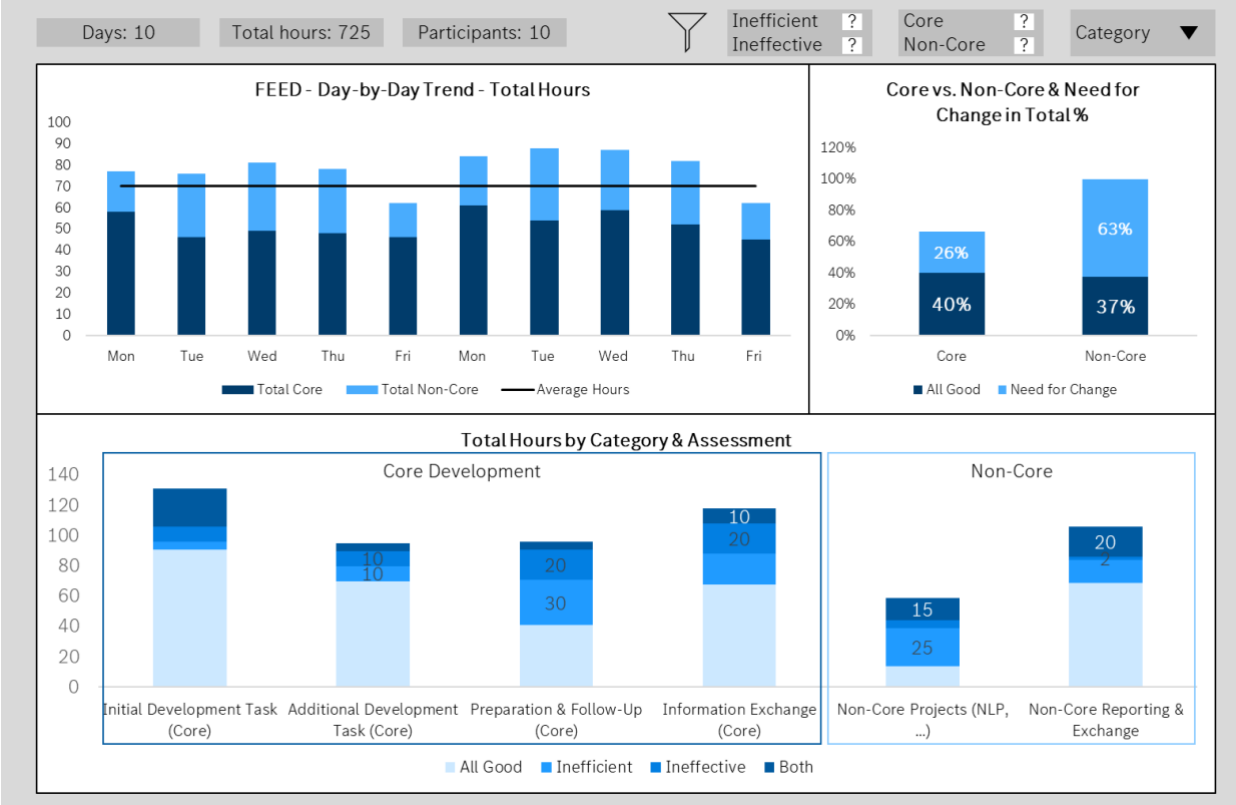
1. **Core Development = Project Work = Value-Adding Work**
    - 1a: Initial Core Development Task
    - 1b: Additional Core-Development Tasks
    - 2: Core Preparation & Follow-Up Work
    - 3: Core Information Exchange
    - 4: Core project but no Budget allocated yet – optional
2. **Non-Core Development Tasks = No Budget / Project-Structure-Plan**
    - 5: (Line) Reporting & (Team) Exchange
    - 6: Non-Core Projects
    - 7: Administrative / Governance
3. **Individual Categories - Optional**
    - 8 &/ 9: Individual optional team specific categories

Appendix C – Mock-Up Input Screen

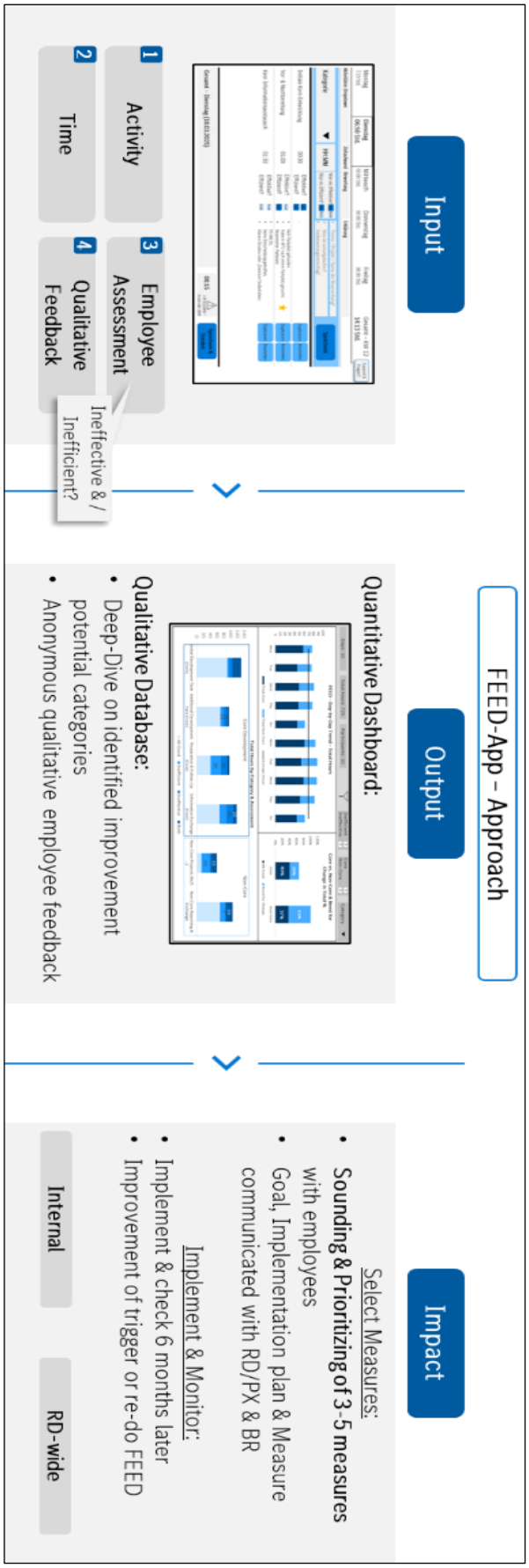


Mock-Up Design of Input Screen for Developers during Input-Phase.

Appendix D – Preliminary Dashboard



Appendix E – Initial FEED Approach



Appendix F – Interview Partners

Role	Hierarchy level	Name for WP	Interview form	Interview Date
Lean Expert & Resource Steering	Manager	Lean Expert	Online Interview in German	02.10.2025
Director Engineering Performance RD	Director with direct link to Chief Technology Officer	Performance Expert	In-Person Interview in German	14.10.2025
Team lead – Development of electric dive unit	Manager	Line Manager	In-Person Interview in German	20.10.2025
Big Data and Analytics Architect	Employee	IT Architect	Online Interview in English	29.10.2025

Table 1: Individual Interview Partner

Focus Group	Role	Hierarchy level	Name in WP	Date
1	Project Lead Software	Senior Manager	PLE SW	29.09.2025
	Team Lead Software Base Layer developer	Manager	SW Expert	
	Lean & Operational Excellence @ Software	Senior Manager	Lean Expert SW	
2	Workers Council R&D	Manager	Workers Council RD	03.11.2025
	Workers Council IT & Software	Employee	Workers Council IT	
3	Director Engineering Performance RD	Director with direct link to CTO	Performance Expert	04.11.2025
	Controlling & Finance Performance @ R&D	Senior Manager	Controlling R&D	
	Efficiency Measures & Performance Steering @ Controlling RD	Manager	Efficiency R&D	
	Project Lead development compact cars	Senior Manager	PLE Compact	
	IT Product Manager	Senior Manager	IT Expert	

Table 2: Focus Group Participants

Appendix G – Coded Categories and Assigned Text Excerpts

Coded Category	Research Question / Theme	Definition / Description	Representative Quotes (verbatim)	Participants (label only)
Participation Model & Cadence	RQ 1 Timeboxed Use & Participant Selection	FEED should be episodic (1–2×/year or 2-week runs) and managers may pick "representative people" to avoid overloading those already overwhelmed. Inclusion: explicit limits to keep acceptance high. Exclusion: cohort size as privacy control.	"It's a one-timer. I do it once or twice a year…" (Performance) "We would be wise to… select a few representative people…" (Lean) "For a limited period of time, I can imagine that." (Line M.)	Lean Expert; Performance Expert; Line Manager
Usability & Input Simplicity	RQ 1 Input Flow & Mobile UX	Make data entry frictionless: mobile-first/app option**;** "today-first" landing; quick navigation (scroll/back days/calendar pickers); simple toggles for E/E.	"I would actually see it as an app… Mobile…" · "Show me today's section directly… enabling a calendar selection… toggle button effective/not effective."	Line Manager; IT-Architect Expert
	RQ 1 Category & Granularity Guardrails	Keep cognitive load low and comparability high: cap categories (~7–8), use time buckets (hourly/few majors per day), and avoid designs that force long write-ups when selecting "inefficient" (prevents "always click yes").	"Right at the upper limit. I wouldn't do any more than that and would rather… merge." · "Make the buckets… show me today's section… less than 20 words." · "It's always dangerous when clicking 'no' requires a follow-up action… then people click 'yes'."	Line Manager; IT-Architect Expert
	RQ 1 Input Simplicity (UI, mobile, Outlook, word limits)	FEED must be extremely low-friction: mobile/app form, today-first view, calendar/Outlook pop-up, predefined buckets, and word limits (5-20 words) to prevent trace-back and long essays. Inclusion: "show me today's section directly", "right at the upper limit… I wouldn't do any more than that", "Outlook integration… huge help". Exclusion: access rights.	"Make the interface so easy that… the team doesn't have to spend a lot of time on it." (IT-Expert) "Right at the upper limit. I wouldn't do any more than that and would rather… merge." (Line M., on 7–9 categories) "Whether we could transfer things from Outlook or the calendar…" (Lean)	Lean Expert; IT-Architect Expert; Line Manager; Performance Expert (tool must work well)
	RQ 1 & 2	Need to explain "effective = right thing" / "efficient = did it	"Whether we need to elaborate on what	Lean Expert; IT-Architect

Lean & Agile + Effective / Efficient	Lean: E/E Guidance, Time & Activity Granularity	right", define time granularity (30 minutes upward), and keep categories at 7–8 max. Inclusion: risk of users clicking "yes" to avoid writing; need for examples; bucketed activities; activity vs waiting split. Exclusion: general mobile/UI wishes.	subjective effectiveness means… That we give the employees there more guidance?" (Lean) "It's always dangerous when clicking 'no' requires a follow-up action… then people click 'yes'." (Line M.) "Make time buckets, make the interface so easy" (IT- Expert)	Expert; Line Manager; Performance Expert (granularity)
	RQ 1, 2 & 3 Lean/Agile Mindset & Feedback Cadence	FEED reinforces lean/agile principles: clarify value vs. waste, shorten feedback cycles, and build team habits (weekly routines, timeboxed experiments). Inclusion: "lean concept," value focus, team-defined value, fast loops; Exclusion: pure technical integration/privacy.	"Because once you've done this exercise twice in a year, you'll have a much, much better feel for the actual lean concept." "we have a very, very fast feedback cycle …" "This is certainly already being done in Weekly Resources by many teams."	Lean Expert; Performance Expert; Line Manager
Privacy, BR & Security	RQ 1 Data Protection, Cohort ≥6 & Role-Based Access	Privacy and works-council conformity: minimum cohort (≈6) so managers can't re-identify; strong pseudonymization/masking; strict role hierarchy ("principle of least privilege"); aggregation-only dashboards. Inclusion: limit text fields; suppress detailed feedback; operations team with restricted prod access. Exclusion: measure follow-up.	"It's very important that we… prevent re-identification… with aggregation… pseudonymization…" (IT Expert) "There have to be more than six people… so it's okay with the works council." (Interviewer: accepted by Line M.) "We have to see how we can work with the works council afterwards…" (Lean)	Lean Expert; Performance Expert; IT-Architect Expert; Line Manager
	RQ 1 Privacy-by-Design Controls	Enforce privacy in the product: word limits (e.g., 5–20 words) to avoid trace-back; pseudonymization; least-privilege roles; charts aggregate only above cohort threshold (e.g., ≥6) with frontend validation.	"Word limit… good way of already limiting the input…" · "Set… limits and validation rules… data is only aggregated and… fetched if it is more than the cohort size… follow… principle of least privilege."	IT-Architect Expert
	RQ 1	If data is stored long-term and used for all-RD comparisons, triggers BR/data-protection	"Note: BR must approve the FEED in each case, as it is based on a TSA…	Controlling (RD);

	Security, Storage & Comparison Scope	concerns; TSA basis implies per-case BR sign-off (written notice may suffice).	If data is now to be stored & overall comparison… then BR & data security problem."	RD/PX –; IT; PLE
Transparency & Quantification (RQ 2)	RQ 2 Snapshot to Quantify Known Waste	Short, limited FEED runs (≈10 working days, min. 6 participants) make "well-known" pain (parking, slow IT, process overhead) objective and thus actionable. Inclusion: "for a limited period of time I can imagine that", "once or twice a year is enough", "valid database". Exclusion: privacy-motivated cohort rules.	"Two weeks is already relatively good… in order to have a valid database." (Lean Expert) "For a limited period of time, I can imagine that." (Line Manager)	Lean Expert; Performance Expert; Line Manager
	RQ 2 Quantification for Hierarchy Buy-in	FEED should convert "known pains" (e.g., parking, slow tools) into numbers that can be escalated credibly up the hierarchy; transparency as quantified evidence rather than anecdote. Inclusion: references to turning recurring issues into quantified hours to gain attention/action. Exclusion: generic calls for measures without quantification.	"If you do that as a model… it can make things transparent that are actually already known… When I tell him… Hours spent looking for parking spaces per week."	Line Manager
	RQ 2 Process & Approval Time Visibility	Transparency should explicitly surface time lost to processes/approvals/tool forms/regulatory steps so managers can see and address non-value-adding overhead. Inclusion: calls to make process/approval time visible; Exclusion: privacy and role topics.	"A big issue for us is processes… making it transparent again how much time we need… what kind of approval… how much process time is there for any tool filling?"	Line Manager
	RQ 2 Snapshot to Quantify Known Waste (extended)	FEED runs (≈10 days) make "known" pain visible and defensible upward; emphasis from line/controlling that transparency must convert to leverage. Adds PLE/controlling angle.	"What are the drivers that generate overhead?"	Lean & OPEX Expert (MB.OS)

	RQ 2 Supplier Accountability via FEED Evidence	Use FEED to quantify time lost due to external suppliers and consider financial recourse (e.g., reverse charging).	"Could be used to quantify lost time due to 'supplier fuck-ups' & possibly reverse charge them."	RD/PX – Engineering Performance
	RQ 2 Subjective E/E signal with brief "why"	FEED uses a simple yes/no on effectiveness and efficiency as a valid first signal. When something is marked ineffective or inefficient, a short reason explains why. Inclusion: endorsements of subjective judgment for E/E. Mentions that employees can describe why it was not the right thing. Exclusion: technical integration or follow-up governance.	"I would answer that with a resounding yes… whether something is objective, effective, or efficient is less decisive than the subjective component." • "An employee might say, 'I'm just not doing the right thing here,' and describe why it's not the right thing to do."	Lean Expert
Measures & Governance	RQ 3 Measures, Ownership & Escalation	FEED must end in 3-5 concrete actions: some solved in the team/E3/E4, some escalated to RD/PX/; otherwise participation collapses. Inclusion: "something has to be done with it", using FEED output to argue for IT-tool changes, quantifying parking/tool problems. Exclusion: communication style/anonymity.	"Something has to be done with it, not just data analysis… we have to define a follow-up process…" (Lean) "If we prove two or three times that we're not doing anything… the tool will be dead." (Performance Expert) "Then I can prove… 15 hours a week spent looking for parking spaces…" (Line)	Lean Expert; Performance Expert; Line Manager; IT-Architect Expert (post-go-live/support)
	RQ 3 PX-Led Governance of Follow-up (Sounding & Decision)	Follow-up shouldn't be left only to line teams; a small sounding/decision forum should challenge and confirm measures, then hand back to the org.	"Objection – no follow-up & support in the decision-making process leads to responsibility being shifted." *(summary)* · "Don't become accountants."	Controlling (RD); RD/PX –; IT; PLE
	RQ 3 BR-Compatible Follow-up Check (Menti)	Light-weight pulse after ~6 months to verify whether teams/managers implemented measures (e.g., Menti), without heavy auditing overhead.	"An option for review/follow-up would be a Menti query to see whether managers/teams have implemented anything."	Controlling (RD)
	RQ 3 "Transparency is Not Enough": Measures Must Follow (extended)	Across functions: transparency is welcomed but must lead to concrete actions, tracked and communicated;	"Very good approach, but we need to pursue it further & not just create	Controlling (RD); PLE; RD/PX; IT

		otherwise acceptance will drop.	transparency." *(summary of project lead)*	
Integration & Scaling	Additional Outlook/M365 Hooks & Team Preload	Integrate with Outlook: post-meeting prompt to log outcome; auto-fill time/subject; preload team from org graph so managers select participants quickly.	"It could pop up again on the app right after the appointment… The conclusion of the meeting…" · "It could probably be sufficient with Outlook, integrated with HR data and org chart."	Line Manager; IT-Architect Expert
	Additional RMS Parallelism & Integration Path (HR/Outlook/M365)	Acknowledges today's duplication (RMS + FEED) but points to integrations (Outlook with org chart, HR to preselect employees) to reduce effort. Inclusion: "duplication of work", "Outlook is integrated with HR… would already fulfill this requirement." Exclusion: AI/grouping roadmap.	"Yes, it's a duplication of work… And unfortunately, the answer is yes." (Lean Expert) "It could probably be sufficient with Outlook because I'm pretty sure Outlook is also integrated with the HR data and the org chart." (IT-Expert)	Lean Expert; IT-Architect Expert; Line Manager; Performance Expert (RMS remains higher-level)
	Additional Digital/M365/AI Roadmap & Scope Control	Future-oriented statements: build on M365/Outlook, use Copilot/AI to group recurring issues, set word limits, define operations/support phase, and prevent FEED from becoming an always-open suggestion box. Inclusion: "post go live plan", "principle of least privilege", "we have to be careful that it doesn't become a suggestion box…".	"If this is in Microsoft 365, we can use Copilot…" (Performance Expert) "We have to be careful that it doesn't become a suggestion box…" (Lean Expert) "Maybe… consider the post go live plan or the support process." (IT-Architect Expert)	Lean Expert; Performance Expert; IT-Architect Expert; Line Manager (mobile/Outlook future)
Workers Council & IT Risks	RQ 3 Communication, Non-Control Framing & Works Council	Participation depends on: clear pre-communication ("not a performance evaluation"), confidentiality, and telling people afterwards what was implemented; works council and HR are mandatory actors. Inclusion: "confidentiality", "implementation has to be communicated", "min. 6 people", "in Germany this is new… laws come into the picture". Exclusion: technical role model (Data Protection).	"When we implement things, they also have to be communicated. There has to be a success story…" (Performance) "For me, the success factors are… confidentiality during the process…" (Performance) "In Germany, this is actually very new… then come the laws into the picture." (IT- Expert)	Performance Expert; IT-Architect Expert; Line Manager; Lean Expert

	RQ 3 Workers Council Engagement Model	BR co-creates/approves general FEED guidelines; after that, individual FEED cycles don't require step-by-step BR supervision.	"Workers' councils do not need to be involved in everything… RD/PX can create guidelines, confirmed by BR and then BR can be out of the loop…"	Workers Council (IT); RD/PX (Org)
Future State & Outlook	RQ 3 Scale Risk & Ops Capacity	Scaling many FEED runs creates operational load; needs a lightweight, standardized follow-up so PX doesn't turn into an accounting office.	"Risk of enormous effort if 10 teams go through FEED per week." *(no verbatim quote)* · "Don't become accountants."	RD/PX; Workers Council (R&D)
	RQ 1 Documenting Cross-site / India Inputs)	Desire to specifically capture time spent collaborating with external/offshore partners (e.g., MBRDI) to inform action.	*No verbatim; stated as "Strong interest … documenting the time spent … MBRDI."*	Workers Council (R&D & IT)

Appendix H – Interview Guidelines & Transcripts

Table of Content of Appendix H

Interview Guideline for Individual Interviews

General Interview Structure

The interviews followed a semi-structured approach. Every session began with a standardized introduction and a set of general questions, followed by specific deep-dived tailored to the interviewee's area of expertise.

1. Introduction & Concept Presentation
    - Brief introduction of the interviewer and the research context.
    - Presentation of the FEED-App Concept: The concept was introduced using a slide deck (Objective, cycle, pseudonymization, input mechanism, and categories)
2. Standard Questions (All Participants)
    - Role: Can you briefly describe your current role?

- Experience: What is your previous experience with time tracking, efficiency tools (RMS; ZEM), or resource steering?
- General Acceptance: How do you assess the fundamental idea of recording activities and rating efficiency over a limited two-week timeframe?
- Closing: Are there any aspects we have not discussed that you believe are critical?

Specific Questions per Role

Methodological Focus – Lean Expert – Interview 1

- Transparency (RQ 2 – Transparency): From a specific lean perspective, does this tool help make inefficient tasks visible? Does it successfully create the necessary transparency regarding 'waste' (Muda)?
- Usability & Scalability (RQ 1 – Usability): What factors are critical for the tool to be practicable in daily use? Where do you see the biggest stumbling blocks?
- Methodological validity: Is the 'digital snapshot' approach sufficient to identify structural issues compared to traditional full-time time/activity tracking?

Strategic Focus – Performance Expert – Interview 2

- Priorities & Adoption (RQ 1 – Usability): What are the top 2-3 success factors that are decisive for this tool to be accepted by the broader organization?
- Actionability (RQ 3 – Action): How can we ensure that the data collection is not perceived merely as a 'control instrument,' but actually leads to continuous improvement?
- Strategic Fit: How does this align with broader efficiency programs (NLP, ...)?
- Future Outlook: If you imagine this tool in 2-3 years, what would 'success' look like from Mercedes-Benz management perspective?

Operational Focus – Line Manager – Interview 3

- Usage & Effort (RQ 1 – Usability): Is the trade-off between the effort of filing out the tool and the potential benefit clear? How can increase the willingness to participate?
- Category Granularity: How granular must the categories be to help you without overloading the employees?
- Actionability & Measures (RQ 3 – Actionability): Do you believe it is possible to derive 3-5 concrete efficiency measures from the dashboard and excel deep-dive results?
- Support Needs: Where would you need support in the process of a FEED? (Interpretation of data, introduction to the team, execution of measures)?

Technical & Governance Focus – IT Architect – Interview 4

- Security & Privacy Risks (RQ 1 – Usability): What are the top security/privacy risks for this specific tool & IT architecture?
- Anonymity Safeguards: How do we effectively prevent re-identification in small teams? What are your preferred safeguard measures / architectural set-up?
- Data Lifecycle What is an acceptable retention and deletion policy?
- Access Rights: Which roles should have access to aggregated data? What policies must be enforced?
- Integration (MVP): What is recommended integration scope for the first version of the FEED-App?

Transcript Interview 1 – Lean Expert 02.10.2025

INTERVIEWER: Hello Name Lean Expert, thank you very much for taking the time for the meeting today. First of all, the meeting is being recorded. Are you okay with that? [0:00:14.2]

LEAN EXPERT: Yes. Thank you very much for the invitation. I am very pleased that we can talk about the topic of resource management. You are welcome to record and evaluate it for your master's thesis. [0:00:26.1]

INTERVIEWER: Thank you very much. You are also (..) part of the (..) resource management team. Nevertheless, I will give you a (..) brief introduction to (..) my tool, which we want to talk about today. And then we can also talk more specifically about your everyday work and your role. So, the multi-snapshot we want to talk about today is part of resource management and is a tool from the world of lean frameworks based on an activity structure analysis. The goal is to create a platform for anonymous feedback and transparency in development activities. It's not just about the activities and the time developers spend on these activities, but also about assessing whether these activities are effective and/or efficient. So the goal is to create transparency and increase efficiency in RT for developer hours. We want to increase value-adding work and reduce waste, which the developers themselves identify. It should be noted that the tool is not intended to evaluate the performance of individuals, but only to identify structures and inefficiencies within the entire team. (...) That's exactly what it's for. We have already discussed everything else in detail in advance. So you are actually in the picture in general, so maybe just a sentence or two about yourself. What is your current role in this area and (...) where are you from? (...) [0:02:08.0]

LEAN EXPERT: My role in this context is that I am responsible for precisely this resource management. Among other things, this means defining exactly how we can improve resource management across the board in addition to FEED, or creating a model for this. That means looking at what people are working on, whether it makes sense, whether they need to prioritize, whether we need to allocate resources across the board, how we can simply deploy people better so that they can devote their best or most important asset, namely their time, to the most important projects, and so that we can also achieve the goals we set ourselves, that we can actually achieve them. [0:02:51.5]

INTERVIEWER: Okay, all right. So, you're obviously deeply involved in the subject, which is perfect. And you also have a certain background. Would you like to say a few words to position yourself here as another expert in addition to your expertise in enrollment and resource management? Yes. [0:03:16.2]

LEAN EXPERT: I'd be happy to. Let me think. Six years? No, I was a project manager for Lean Management in Mercedes' global after-sales department for eight years, and we mainly looked at administrative tasks there and saw where we could help not the developers, but the clerks and project managers in after-sales to work more effectively and efficiently. In other words, we really introduced and implemented it in the administration department, provided support and guidance, and also coordinated the program. [0:04:03.2]

INTERVIEWER: Okay, very good. So, you already have some experience with Mercedes and have also worked there as a team leader. Perhaps you could tell us a little about your experiences with time recording. So, you have to record time yourself, whether it was general activity structure analyses over a short period of time, did you yourself write on RMS (feedback system) (...) the project time hour recording from the RD or just about your personal experiences with it? (...) [0:04:38.0]

LEAN EXPERT: I have never written productively on time tracking systems because I have only been in IT for two years. And the topic of time tracking and development time recording

is a very specific topic in IT. We have found that for many other companies out there that invoice and provide their services to other people and bill them for it, this is a completely normal practice. But within Mercedes, that is not the case. We do it in a similar way. But you'll probably come back to that later. However, we don't do it with the aim of allocating our time sensibly and getting our work done, but as an administrative task, because it's a requirement, an obligation, but we don't really do anything with the data. Outside of research and development, however, booking time on projects is only a very small part of the job. So it's hardly ever done in sales as a whole. It's done to some extent in IT, now with billing or with the introduction of Safe as a working method, as an agile working method, as an overall framework, it's done again and again, that people make the exact assignment of employees to Arts Release Trains, but project time recording to really accurately write down how you said at the beginning. Which project are people working on and is that valuable or not? It is only done selectively and, as mentioned earlier, within the framework of an activity structure analysis, which is not carried out across the board (...) but must also be approved by the works council on a case-by-case basis. [0:06:35.3]

INTERVIEWER: All right? I think that's also a very good transition to the points that FEED is not a continuous time recording via the FEED tool, but that RMS remains a component (...) and FEED can only be requested for certain triggers or at the request of the employee or another neighboring team or the project manager, and then takes place for a cycle of two weeks. So here's my question: How do you see (...) the issue of acceptance, but also the two-week period as reasonable? Is it acceptable to have a kind of double recording? Is it okay to record in such detail in RMS and FEED? Or should we perhaps record even longer to get more accurate input? [0:07:29.6]

LEAN EXPERT: Let's break it down, because I think there are different aspects to this. On the one hand, there is the issue of the time frame, acceptance, and possibly also efficiency potential within a period of two weeks, I believe. We're not saying it always has to be from the 1st to the 15th, but rather that colleagues choose the time frame themselves. I believe in that. If you take a normal standard week, two weeks is already relatively good because we have a lot of meetings, or rather, a lot of appointments, let's say, that can be easily recorded within two weeks. And if we have an appointment every four or six weeks, then we might also include that and say that if it's just a one-off appointment, it's not that important. So, in plain English, I think it's good to write down the two-week period without interruption in order to have a valid database. [0:08:29.9]

INTERVIEWER: Okay. [0:08:30.6]

LEAN EXPERT: Acceptance by colleagues is also a two-sided issue in my view. I believe we have an enormous need and an enormous willingness to give feedback. I recently had a colleague who said, "If you just give us an anonymous feedback channel to point out improvements, then my colleagues and I will be very willing to do so." That means a certain attitude is required from the employees. And of course, we have from to, but it will certainly lead to many people actually using it. And that brings us back to the question of who should write? If we as team leaders or department heads say we're going to do this, it doesn't mean that everyone, absolutely everyone, has to do it. Instead, we would be wise to say that we will select a few representative people who may be more open to this and who are willing to do it, and not necessarily just the people who are currently in task force mode and completely overwhelmed. And we would now give them another topic. This leads to the third topic, efficiency. Or rather, what do we have? Yes, it's a duplication of work, and we've already been asked whether we have to write RMS at the same time as we do FEED. And unfortunately, the answer is yes. We don't yet have the option of comparing the two because we are looking at two different aspects.

And it's simply because we are looking at working hours from different perspectives, as in a matrix. In RMS, we look at the project hours and are only interested in which project you worked on. We are not interested in what we did outside of the project. And we are not interested in how efficient or effective the project was, but rather in recording everything that is directly or indirectly related to the project work, because we want to break it down precisely into the projects and thus also activate it or allocate this performance to the project according to the principle of causality. With FEED, it's not about wanting to know which project people worked on and how the distribution is correct. We can get that from the SMS. Rather, it's about how efficient or effective we were. And that's why we've come back to the idea that, yes, unfortunately, we have to do two things at once at the moment. That will also lead to discontent. It would probably make more sense to make a deduction here or be more efficient. But as you know, we don't really have a solution yet, because we have the choice between always recording everything completely, which would certainly be inefficient, or partially, if we do such things for this limited period of time. To also record the other perspective. [0:11:41.1]

INTERVIEWER: Yes, very good. I think that's definitely a point that should be included in future iterations. That was also the feedback we received. Let's move on to the question of transparency and real disclosure. You mentioned RMS, which is a tool for writing projects, and FEED, which is more general in terms of how efficient or effective the activities are. And that's a very subjective question that is then asked of the employee. After you've entered an activity, was that activity effective? So, was it the right thing to do, and was this activity efficient? Was it carried out correctly, or were there delays or similar issues? Based on your personal experience from the many pilot workshops you have conducted over the last few years, would you say that this approach is sufficient to create enough transparency for general feedback on the team? Would you say that this approach is okay for creating enough transparency for general feedback to the team? Of course, it's not general in the whole sense, but that's within the team. But then a simple question about efficiency is enough, not efficiency in this aspect. (...) [0:13:06.0]

LEAN EXPERT: This is where my experience as a Lean Coach comes in handy, because of course you could say that we can draw one conclusion or one key point from these two pilot projects. But in our experience, including in the lean measures and activities we have carried out, it is rarely the objective that matters, because whether something is objective, effective, or efficient is less decisive than the subjective component. So I would answer that with a resounding yes, because: Am I doing the right thing here? Yes. To specify what the right thing is, we would probably need a doctoral thesis. For each of the activities with inclusion and exclusion lists. And that would simply mean a huge amount of effort. And even if we defined it very, very clearly, people probably wouldn't even understand what it is and would say, "That wasn't really the right way to describe it." And I think we'll achieve our goal much better if we, because our goal is not just to identify inefficiencies that are purely objective inefficiencies, but we really want to motivate people to spend more time on the right topics and be very productive. And I can increase productivity. From my point of view, by really addressing what is subjectively inefficient and ineffective. And, of course, we will find things here where an employee might say, "I'm just not doing the right thing here," and describe why it's not the right thing to do. Because why do you think a certain strategy or product doesn't make sense? But we don't just say yes based on this feedback; we aggregate the feedback from many employees and then see if many people share this opinion. If so, then we have the wisdom of the crowd, and there seems to be something to it. And it's not just taken over one-to-one when many people respond, but there is then a subjective evaluation by the team leader or department head, who looks at these things and then draws his conclusions. [0:15:36.3]

INTERVIEWER: In other words, you could say that we are also searching for partial intersubjective transparency and inefficiencies, and that these subjective yes/no questions sometimes provide the first indication of where to look. It has not yet been decided that anything needs to be changed definitively. [0:15:59.7]

LEAN EXPERT: We also have a tool, as you know, that addresses the question of, and we might need to take another look at whether we need to elaborate on what subjective effectiveness means. Yes, whether we need to establish that a little further, whether we say that something is effectively the right thing to do. If it moves me forward in the right direction in my project, then it contributes to that. So, a paraphrase. And whether this topic I'm currently working on moves me forward in the right direction. I think the developers are very well placed to decide that. Yes, exactly the same with efficiency, that we just say these two things again. What does effective and efficient mean? That we give the employees there more guidance? That they don't just say, "Man, I don't know what you want, but I'll answer no for now." [0:16:58.6]

INTERVIEWER: Yes, definitely. I think this needs to be clarified and structured in a simple way so that people can quickly understand it, just like the category descriptions. And I think that brings us to the next point. If it's not well described and simple, then it won't be used. Then people won't want to use it, or they'll only use it for two weeks a year to get it out of the way so their boss doesn't say... We've just addressed two points. The categories must be clearly described and there must be examples for the individual teams of what belongs where. The question of effectiveness and efficiency must be clearly described so that people don't ask themselves, "Is it effective? Is it efficient?" What other aspects would you say are extremely important in terms of usability so that the tool is actually used in the end? [0:17:50.5]

LEAN EXPERT: As I said, I think the easier it is to fill in, the better. That gives me the idea of whether we could enable voice-to-speech input, as we do here, which we have in many ways. Or, you know, we say this qualitative feedback, what's going well or what's not going well, or the improvement? Some people might find it easier to use voice-to-text here and then perhaps even summarize it using Copilot and say, "Let's take the most important points from what I've just said here." So that would be another idea. We need to make it as easy as possible for our colleagues. The idea is also to ask, "How can we achieve this?" Perhaps in the long term, it would be worth considering whether we could transfer things from Outlook or the calendar and maintain them directly in the calendar. It was a good appointment or a bad appointment. But first, we need to take the first steps, and perhaps that's also an opportunity to say that we'll incorporate it into our daily work routine. You're already using Outlook, but with a long-term view. But maybe this is also an opportunity to say, just as I can mark a calendar entry in a certain color or I can do something with a flex in Kanban, I can simply say, I press a button and a plugin sends me feedback that I can send to the organizer of this meeting to say, hey, that wasn't so good or we could do better. [0:19:53.3]

INTERVIEWER: Okay. Yes, very good. I think that's an extremely important point that we need to bring up in the iterations, maybe even right at the beginning, because I think that once it's rejected, then people will reject it again next time, even if it might be better. We're running out of time, but we still have two more quick questions. (..) One point also touches on the role of the employees and thus the acceptance of the tool. So how can you ensure that it's not just a data collection control, but ultimately a tool that helps people improve their everyday lives, so that their everyday lives are free of waste, which no developer wants. What? What? What conclusions would you draw that need to be made in order to make it appealing to developers? (...) [0:20:50.3]

LEAN EXPERT: Something has to be done with it, not just data analysis for the sake of data analysis, but we have to define a follow-up process that is rigorously implemented. And we have to see how we can work with the works council afterwards, because they have a big interest in how we, together with the works council, can perhaps address the needs of the managers here. Yes, you can do this, we have to get it approved. But then we also want to know what has changed. (...) Number one and number two, we have to create a follow-up process for all the things that are not within our own management. That means, as you know, where we have cross-cutting issues, cross-cutting IT systems, cross-cutting processes, approval processes, or whatever. Or what we have right now, improving a parking situation, where we identify the people responsible and identify the process so that we can work through it and improve it for everyone. (..) [0:22:10.2]

INTERVIEWER: Yes, I think that addresses two points. I think it takes away people's fear that it's a form of control and instead says, hey, look, we have a clear process here that has been agreed with the works council on the one hand and with your managers on the other, about what should really come out of it, what will help you, whether it's IT, parking spaces, or whatever. Yes, definitely take away the fear and then also the enthusiasm, maybe a little bit of using the tool properly. That brings us to the last question. So we've talked a lot about the present, but also about the future in some ways. What else should FEED focus on in the future? So if you were to score points at Mercedes now, perhaps looking ahead five years, but maybe in two to three years, where would you classify FEED as successful if you said okay, you're introducing it, you're fixing it. Where will it be in two years? (5) [0:23:13.7]

LEAN EXPERT: I think we already covered that earlier, in many points. But if we take a look at an ideal process, then in an ideal process, RMS makes it clear to employees that the time they spend on projects adds value. (...) Which has increased significantly. (...) And where they are dissatisfied because they think it's not the right thing to do or is inefficient in the few positions, they have a direct opportunity to say, "Hey, I'm opting out of this meeting or this topic. It's not the right thing for me." Perhaps also in direct rejection, to say, "Sorry, I think that's ineffective. Sharpen it up again and tell me why it's the right thing to do." It could also be due to a lack of clarity in the assignment, then it seems. And then it's also an important process to ensure that the topics are the right ones. (...) Incidentally, this can also be done by the manager to the employees, where the employee says, "I'm involved in the following five topics," and the manager says, "Stop, that's ineffective, so prioritize." It can be a two-way street. From my point of view, and with the inefficient topics, I see it as we had earlier, that we have a very, very fast feedback cycle where we can ultimately say to several people on topics that affect different people, "Hey guys, lots of feedback, that was inefficient, let's do it this way, and then the AI, which will support us much better in five years, can also say, "Yes, go ahead and make this or that suggestion." That way, it's better to come up with a solution directly, which is then implemented immediately. But everything depends on it. Do people do something with it, or are they too busy to sharpen their saw? (..) [0:25:35.3]

INTERVIEWER: Very good. A direct follow-up question on that. You said that if people notice something that is not correct, i.e., something that does not add value, they should have the opportunity to respond or provide feedback immediately. So do you see a process where FEED is constantly accessible, so to speak, or in a modified form is a complaint box or something else, or can be started directly by an employee themselves or runs constantly? So how do you see it, that it's direct or a complaint and then it's started next week? How do you see this direct, immediate possibility? So yes. [0:26:16.0]

LEAN EXPERT: Yes, I think we have to be careful that it doesn't become a suggestion box that people always use because they always complain. That's one thing. But on the other hand, in an

ideal world, if I collect the information and we use AI to evaluate it, we can identify the significant issues and group together the topics that relate to the same meetings, the same projects, or the same types of issues. Then this can be a powerful lever for identifying the relevant issues relatively quickly. (...) [0:27:00.5]

INTERVIEWER: Very good, thank you very much, Name Lean Expert. That's it. The half hour we took is already over. Thank you very much for your feedback and your insights. [0:27:11.6]

LEAN EXPERT: Thank you very much for this great interview. [0:27:13.9]

Transcript Interview 2 – Performance Expert 14.10.2025

INTERVIEWER: Hello Name Performance Expert, I'm recording this, as we just discussed. Is that okay with you? Yes. The recordings will only be used for scientific purposes and for the Mercedes project, and will be deleted after evaluation. Your name will not appear anywhere. So let's jump right in. You know the problems. And you know the ecosystem. Now let's look at this right-hand efficiency measure bar. Here, we are specifically concerned with having qualitative and quantitative data transparency from a management perspective in order to become faster and more efficient. But also to generate a feedback tool for the developers and the people who are overloaded, to solve these non-value tasks and refocus on core work. That is the goal on two different levels for management, but also for the developers, hand in hand with MA. In addition to the transparency tool and the new time tracking in the RSS 2:00 null project. How does it all work? We have an input field where you have to enter activities, which we'll take a closer look at in a moment. With the respective time, there is then a small employee assessment with just two questions: Was it effective and was it efficient? If the answer to either of these questions is no, qualitative feedback must be provided. What exactly was the activity? What went wrong and what is your suggestion for improvement, dear employee? This then leads to the dashboard. We can also take a look at it right away, where the E4 or E3, depending on the size of the team, can look at it to identify trends. Of course, this is by no means a performance assessment tool, but rather a tool for identifying trends and structures in the team where there are inefficiencies. And in this dashboard, the goal is to find the area or category where things are not going well, and then to look at these individual qualitative feedbacks in Excel Deep Dives in order to generate measures. And that's

the last point. How does real impact come about? The E3 e4 are required to develop 3 to 5 clear measures from this qualitative feedback from soundings and from discussions with RTPX. These can be either internal or RD-wide measures, but at least 3/5 or 2/3 must also be internal in order to become faster and better. These must be approved by the team and then implemented over a period of six months. The rough outline of what this might look like is not quite ready yet, but just to get an idea, these categories are listed above. Then there is a question for each hour unit and an explanation at the back. If that's okay, it goes into this list of your recent activities. So far, so rough. Understood. (5) I'll find the dashboard. Let's leave that aside for now and maybe discuss it again at a later date. And now let's get into the questions about you and your goal for this MA. So first, maybe for you. Can you briefly describe your role again? [0:03:31.9]

PERFORMANCE EXPERT: Management of our performance initiatives, the alignment of our new target operating model, and the topic of resource management. That basically means all activities for the global development network that serve to create development efficiency and performance. [0:03:49.5]

INTERVIEWER: All right, thank you very much. So, you've seen that we have this tool, the concept behind the tool, and our goal is to reduce waste and eliminate inefficiencies. To generate a feedback tool, to create transparency. You are now a performance expert and head of the team here. What is your goal for such a tool? Looking at the big picture? What are the messages you want to convey? [0:04:23.3]

PERFORMANCE EXPERT: What I'm interested in is identifying the real drivers of inefficiency. and waste. And this is based on a very pragmatic idea that no one here in the organization actually likes to deal with things that distract them from product development. That means it's a very important lever for me to help people focus on what moves us forward in development. That's one point. The whole thing has to be action-oriented, what we analyze here. Specifically, that means it has to be granular enough at this point that we can really discuss

corrective measures and track their effectiveness when we repeat such a topic. And in my view, positioning within the organization is voluntary. But one thing is important: we have various triggers; we do time recording. Time recording is deliberately kept at a higher level of aggregation. I see that. How is the time distributed among the projects? But I don't see how valuable the time is within the projects. And I don't see what's stopping people from doing project work. In other words, I can't explain the delta between the percentage of project work, which is around 70 to 80%, and 100% of working time based on the time sheets. And it's precisely for these cases. The delta to 100%. And the value of project work is that we have the tool to manage it accordingly. For this, it is important to me that we are granular enough. We said that in the time recording. This tool is deliberately not that granular. The granularity must be provided here. (..) [0:06:18.5]

INTERVIEWER: Does that mean in the categories or in the detail of the time recording? That means that, ultimately, eight hours of the eight hours that the employees have worked should also be tracked. That is the goal. So what? How do you define granularity or both here? [0:06:35.1]

PERFORMANCE EXPERT: Granularity in this context? For me, time tracking is deliberately less natural, because I do it every day and it has to be as efficient as possible. Exactly. [0:06:43.8]

INTERVIEWER: And that would be just. [0:06:44.6]

PERFORMANCE EXPERT: If I now say that I have an indicator that an area or a department needs action. Or I have a manager or an employee who says I want to take a multi-moment snapshot on demand because I see potential here in terms of efficiency or effectiveness. Then I use exactly this tool. It's a one-timer. I do it once or twice a year, and it has to be granular enough. And that's where I enter the data into the map. [0:07:15.4]

INTERVIEWER: Okay. You mentioned that there has to be a follow-up, of course, because otherwise it's just a tool that we've created. And then, even if it's only once, the employees are annoyed by it. (..) I brought this up with the idea that we have internal measures for the team internally, and we have RD-wide measures, which of course exist and are now being quantitatively documented here. So many employees are always complaining about this same IT tool feedback. What does a follow-up process look like to you? Is it granular enough to assign this task to the lines with line managers? Or how would you best imagine the follow-up process so that you can really see a change from an instruction? [0:08:09.2]

PERFORMANCE EXPERT: So, the role of the manager, and I would explicitly address this at level three, is clearly to implement measures, i.e., to carry out countermeasures and remedy the problems. I see this as the absolute responsibility of the line manager. There will be things that cannot be solved at the line management level. And we have to look at those centrally. That's where we come in with our governance role, and we have to take those things on board. What we're doing here is, in a sense, making a promise to people, giving them a commitment that the time they invest will be rewarded with something that helps them. And if we prove two or three times that we're not doing anything or that nothing is happening, then no one will use the tool anymore, and it will be dead. That's a very, very important issue for me. And that's where we come in with our governance role. On the one hand, we need to ensure that the area-specific measures are implemented accordingly. On the other hand, we need to address the overarching issues accordingly. We need a tool, whatever form it may take, where these measures are entered for the follow-up process. This can be done somewhere in the Microsoft 365 ecosystem, on a SharePoint page or a team page, whatever. But we need transparency about the sum of the

measures. Flagging what is specific to a particular area and what is not. If this is in Microsoft 365, we can use Copilot to do a clean evaluation. Where are the things that are mentioned more frequently, that are repeated? What are the hotspots? And we have to make sure that we control these things. This requires regular communication to ensure that something happens, that change happens. Otherwise, people won't know and will think that nothing has happened. That would be just as harmful as doing nothing in the first place. [0:10:17.3]

INTERVIEWER: So, to come back to SharePoint, this list of measures doesn't include every measure that any employee reports, but rather the collected ones. I have E3 and E4 and my team and I have agreed on these six points. I'm now reporting them back to RTPX, and they will be added to the list with a target of six months until the next tracking. And what does that mean for the team? [0:10:43.5]

PERFORMANCE EXPERT: It requires a handshake, where you say, these are the measures for department XY. [0:10:49.7]

INTERVIEWER: They agreed on this internally, and we also accepted it as reasonable. Yes, all right. [0:10:57.0]

PERFORMANCE EXPERT: Does the manager have to discuss this with their employees, by the way? [0:11:00.3]

INTERVIEWER: Absolutely, absolutely, absolutely. That's right. It can't come from the manager themselves. It has to come from the bottom up. Then the manager has to look at it and give feedback. Okay, which one do we take now? Maybe one more point on this acceptance issue. You also mentioned that if nothing happens, it will be done twice and then word will get around. Nobody does that shit anymore. What are other success factors besides the point that we really have to implement something, because of course that's the ultimate game changer for creating acceptance. If real improvement comes, do you see other aspects that can be brought in to make such a tool acceptable to the team? [0:11:41.2]

PERFORMANCE EXPERT: Well, there are. There are prerequisites here and there are success factors. In terms of prerequisites, the works council is clearly an issue. Another important point, in my view, is that you have to do it well. (..) It's a common position and basis with HR, and it's that the tool simply works well. It works well and has the right granularity. Can that be controlled? For me, the success factors are the implementation of measures afterwards, confidentiality during the process, and the type of communication, the approach to people in advance, that it's fine and precise and good enough. (4) So, and then we have a communication task in that context. That's what I just said. When we implement things, they also have to be communicated. There has to be a success story, then we get a pull on the topic so that it's also done and used. [0:12:48.4]

INTERVIEWER: Okay, so you have anonymous communication beforehand and during the process, plus ongoing communication and then implementation and feedback. Hey guys, it's been implemented plus story out there Best practices Hey, look what we've done. Everything's clear with this tool. We went through the pilot. (...) This list in different groups can be remembered in this waterfall. A calculation was made that you can create approximately 9.1% more direct value-adding work by eliminating waste, cutting inefficient meetings, etc. That's definitely a benchmark from the pilot, which certainly won't work everywhere. Is that the target factor for you, or is it the success of FEED, or what does success look like for you? From the efficiency tool. However it ends up being implemented. (4) [0:13:52.6]

PERFORMANCE EXPERT: There are two levers. One is simply employee satisfaction with being able to do an efficient job here. If you stand in front of the cafeteria today and ask people if they can work efficiently today, most of them will say no, and that's a problem. Now you can

discuss whether there is any company where employees say, I can work efficiently" when the industry is under pressure. I don't know. Yes, I think so, probably. It will probably be difficult for large companies. Yes, but that would be an interesting aspect to look at. Does such a company exist? (..) But that's one issue. The second issue is that we are simply looking to increase productive time within projects. We are currently losing capacity due to job cuts, the reduction of Arnie, and the reduction of 40-hour contracts. All in all, that's a very high value that is already missing today. And we have to find a way to deal with it. And that can only be done by increasing efficiency. Ultimately, the question is: what is realistic? Now you say that 9% is not valuable within the projects, but only 80% are projects and only from the people who write in projects. There is still the whole management side. There are still people who have cross-functional roles and don't write at all. And in the end, that's what it's all about for me. And that's the ultimate goal of everything from resource management, to review, to structures in the company, and to the multi-moment snapshot. That a higher percentage of the total hours available here goes into productive projects. (..) [0:15:56.4]

INTERVIEWER: Okay, very good. That means we're actually already coming to the last question. We are now looking at the outlook or this general target vision. Depending on how quickly the wheels turn here at Mercedes, if you look ahead 1 to 1½ years or up to two years, where could you imagine such a granular tool being used? The goal right now is only for people who have a trigger due to poor RMS times, employee feedback, or their own initiative. I want to improve through a PLC that triggers something like that, and only for writers, i.e., only for people who write projects, there is still no non-value-adding work in RTPX. We wouldn't be able to use this tool yet. Where do you see the tool? Maybe in a year or two. Does it replace RMS? Is it a constant feedback suggestion box? [0:16:54.3]

PERFORMANCE EXPERT: Well, first of all, I wouldn't limit it to project work. So we should design it to be neutral. I could imagine, for example, that you say, "Look, we don't have any projects, but we work operationally." Especially for those who don't have hourly billing, I think the tool is actually fabulous, because for them it's about 100% of their time, what they do and what is valuable. That's about the scope. In other words, I can already imagine that such a tool would also work for Mercedes. I can also imagine that within development, we will now relatively quickly shed a certain layer of overlapping measures. They won't be converted overnight, though. All topics, because there are of course many long-term ones. A lot will come out in terms of the IT landscape. A lot will come out in terms of projects, processes, process landscapes, MZ, etc., and these are things that will not be 100% different a year from now. So we will come to things, and we will also communicate. We will say that things are in progress, we will give interim results, but they will not be gone the day after tomorrow. We will still be reporting on them a year from now. But it's important that this kind of activity becomes anchored in our mindset and way of working. Because once you've done this exercise twice in a year, you'll have a much, much better feel for the actual lean concept. And for me, this is really about lean. What adds value? What doesn't add value? What moves us forward? What brings us closer to our goal? What doesn't? Are we taking the fastest routes to achieve a specific goal in an efficiency-driven manner? Or are we taking detours? I think it's essential to have a dialogue and use the topic. [0:18:59.0]

INTERVIEWER: Then there are questions about that. I believe that anchoring this idea is fundamental, because once you've done that, you no longer need the tool, because then people will switch gears themselves without needing a tool like that. Processes and topics and inefficiencies. [0:19:13.7]

PERFORMANCE EXPERT: Hopefully except for the overarching issues. [0:19:15.9]

INTERVIEWER: Absolutely. One more question on that. You said, even for people who don't keep track of hours, let the day be strong, let it be our team. (...) You can. But then, of course, you can't apply this idea of value creation to our team or wherever. Where is the idea of value creation in our team? [0:19:39.0]

PERFORMANCE EXPERT: A team has to define it for itself. [0:19:40.5]

INTERVIEWER: That means the categories that are written down and then defined as value-adding must be defined by the team leader, and then that can also be converted, because now it's just right. Sure, as soon as we start working on the RMS project, you have it in the RMS project. That's value-adding for the project, and then you can divide it into preparation and follow-up, actual development, and (...) exchange with other people. And then they are either efficient or not efficient. [0:20:13.3]

PERFORMANCE EXPERT: Yes, and I would like that. So, I don't know the input categories yet, we should take another detailed look at them. (...) [0:20:23.5]

INTERVIEWER: That's the idea behind input. So we can end the interview shortly. That's it for the questions. Then let's just go, shall we? [0:20:31.2]

PERFORMANCE EXPERT: Let's do that. [0:20:32.0]

Transcript Interview 3 – Line Manager 21.10.2025

INTERVIEWER: So, it's completely confidential. We'll keep it between the two of us. As I said, I am recording it. Just for them. Just for scientific work. Is that okay with you? [0:00:11.8]

LINE MANAGER: That's fine with me. [0:00:12.8]

INTERVIEWER: Thank you very much. Will it be deleted afterwards? Your name is nowhere to be found. (..) It's just a very general slide. Internal challenges. External challenges. It's all pretty well known. That not everything is running smoothly. No active resource management. Partially not. Precise maturity and resource investment matching. How much maturity do we have? How many resources have we already invested? No clear transparency where inefficiencies occur. Partly based on gut feeling, but not quantified. On the other hand, we have legal and accounting reasons. To track times more accurately. We have the RMS system running, but we'll come to that in a moment. And that's how our new resource management model came about. We have a new measurement system with new input masks that are much nicer, easier to fill out, etc. This then creates a dashboard for line managers, including you, but also for PLEs (project managers), to easily match resource investment to the various PSP elements. That's one side of it. It's more of a governance aspect around how we can record hours more accurately again. New PWC on board, no longer KPMG. Do we need to take a closer look? And then we have this efficiency point. Hey, we all know that there is an incredible amount of waste in the tool world, in the parking situation, in meetings, etc. Can we quantify this and somehow provide people with a feedback tool to work on it? This is certainly already being done in Weekly Resources by many teams. But can we also underpin that with data transparency, Planbar. [0:01:58.8]

LINE MANAGER: Because it's really rigorous. It always comes up. [0:02:01.3]

INTERVIEWER: Yes, exactly. Is there always feedback? That's exactly what this Feed app for feedback efficient and effective development is all about. Hence the acronym, no longer multi moment aufnahme; (multiple snapshots), to avoid the MA. The goal is to provide an anonymous feedback option for developers and to create data transparency on the other side. What is running efficiently? What is not running efficiently? So, we have an input field here, which we will go over right away. Then, at the end, we get an aggregated dashboard with outputs. Where is there inefficient spotting, where is there ineffective spotting, where is there both spotting? Perhaps to highlight certain categories, so to speak, and then also for line managers, i.e. E3 and E4, to go into the details again and look at the individual feedback evaluations in order to ultimately define 3 to 5 measures or actions for. Whether these are internal team measures or external advice measures, i.e. not external (...) external HD measures. Hey, look, we lose so many hours because of this IT tool. Now you have a basis for why we need to change something. That's the idea, that's the (...) flow in principle. Of course, the goal is by no means a performance evaluation, which means that all data is anonymized and it's more of an anonymous feedback tool to quantify the developers' waste and waste in order to make it possible to improve it. That's all I have to say for now. The cycle lasts two weeks, about ten working days, we'll come back to that in a moment. There have to be more than six people for it to be okay with the works council. So, it doesn't work in every team. You have to merge teams. [0:04:02.7]

LINE MANAGER: But should it be 1111 specific to certain areas for a certain period of time? We had talked about this before, when it wasn't recording hours continuously in RMS like it does now, but rather... [0:04:15.1]

INTERVIEWER: RMS is the governance tool that simply has to continue running, and then certain trigger points arise. Whether it's PLE feedback, pulse feedback, or very high or very

low RMS feedback, this feed, this tool, can be requested and then implemented for two weeks. After that, there is an evaluation and then these measures are introduced and hopefully implemented. [0:04:40.7]

LINE MANAGER: Okay. [0:04:41.0]

INTERVIEWER: So much for that. Now maybe to you, Ulli, please introduce yourself briefly. What do you do, so we can get a little bit of context? [0:04:51.5]

LINE MANAGER: Software development and calibration for i.e., for electric drives. [0:05:00.1]

INTERVIEWER: How big is your team? [0:05:02.3]

LINE MANAGER: 20 people. [0:05:03.4]

INTERVIEWER: Okay. You also record your hours on RMS. How does that work? Do you have a collective recorder, or does everyone record their own hours? [0:05:12.1]

LINE MANAGER: We do collective entry per month, per week, and it runs via automatic

distribution in RMS. [0:05:17.2]

INTERVIEWER: Okay, monthly feedback every month. [0:05:19.5]

LINE MANAGER: Yes, monthly automated feedback, in fact. Okay. [0:05:22.5]

INTERVIEWER: All right. Let's jump in a little closer. So this is still a very manually designed input mask, but just to understand the input process, go to. After an activity, the developer clicks here on Category and then has a drop-down menu with eight categories. We'll come back to that in a question in a moment. They select one of these categories, enter the hours, and then answer yes or no. Was it efficient or was it effective? So, it's explained that effective means it was the right thing to do, and efficient means it was done correctly. If the answer to a question is no, a description must be filled in. What exactly went wrong and where? What would be your suggestion for improvement? Sometimes it can be that the IT tool didn't load for two hours. Fix the problem. That's not always so easy. Exactly, that's the point. (...) If you look at it that way, it does take a certain amount of effort to do that, to enter it, to record it. Sure, it's only for a certain period of time, but how would you say you can increase acceptance for (...) such extra effort? In a stressful everyday life, which is not always easy. (...) [0:06:46.1]

LINE MANAGER: Well, for a limited period of time, I can imagine that. So if you say for a period of two weeks, hm. Would that work? Yes. It's always dangerous when clicking; requires a follow-up action. Yes, because that could lead to people clicking; anyway so they don't have to enter anything else. On the other hand, I would say that we are really struggling with issues such as finding parking spaces and inefficient IT tools. Yes, and I think there would be some who would also use such an opportunity to, let's say, report back on the inefficiency of the IT tools. [0:07:28.6]

INTERVIEWER: Okay, you're talking about a period of two weeks, so that's ten working days, more or less, times eight times twelve. It depends a bit on the week, but is that a period that you would say reflects a normal workflow, or would it need to be longer, or could it be as little as five days if the week is chosen cleverly? [0:07:50.7]

LINE MANAGER: Actually, I am going with the two weeks. That's definitely not wrong. We actually have... In our development cycle, we have phases where we focus on software development. And then we have phases where the focus is on (..) application tasks. So that means that we sometimes work intensively on software issues over a period of, I don't know, four weeks or so. Then we have another four weeks that focus more on (..) testing, then (..) on

the other hand, I am just thinking, we have, I have, I have both areas in the team. So, the question is, to what extent could that even out again? So, from that point of view, two weeks isn't such a bad idea. [0:08:35.0]

INTERVIEWER: And you can choose that too. It's not like we're starting now, but okay, we'll start in two weeks, because then it will be this and that phase, and I have a feeling that there will be bad feedback. All right, okay, everything's clear on that. Let's jump into the categories now. It looks very complex. I'll try to walk you through it briefly. What? What the thinking behind it was. So, we have one up here. A bucket development, so to speak. Everything that's in the project. So, real initial core development tasks, i.e., what real development is, yes, additional core development. So maybe there was another test request, a change request, and an overbooking. That's real development work, too. But maybe it wasn't included in the initial plan. Yes, preparation and follow-up are part of the project, but not directly development and core information exchange. So now we have a meeting that really moves me forward. Then there are other points, such as a POW here, where there is no PSP element yet. But in the end, it's also project work. The question is whether you use it. But those are the points about the project, and that also gives you the total, so to speak, that you would theoretically report back in RMS, because that's actually the project work. Then you have everything that is not PSP or not a project, such as a reporting team, weekly exchange meetings, one-on-ones, and so on. Further project work, something like an NLP winning attitude pacing colleague. Something administrative and governance. Theres a lot that falls under that, which will most likely be inefficient in some cases. And then there's an option for the line manager to add special items. Do we have problems? And with our India Exchange, we have special IT tool problems that I would like to map individually. It depends a bit on whether you want to or whether he wants to. Does the line manager want to find out something specific? The whole thing looks kind of like, when you think about it, with the PSP element being initial. So, what am I working on? Follow-up and information exchange PSP, but no extra budget. This additional work and no PSP element is back there in

Line Reporting Core and these posts. [0:10:57.2]

LINE MANAGER: But I still don't understand. What is PSP and No Budget? [0:11:00.3]

INTERVIEWER: That means if I've just taken on another assignment from PS, but haven't received any compensation for it or no one in one out. But it means that the vacation wants a new button. Okay, make a new button, okay, we have to do that, but its not really our initial work. When you see that and think back to the eight categories, they jump out at you. When you click on a category, is it too much for you, or is it too little? Is it not granular enough to list your diverse work? Of course, it's not broken down by PSP element, but simply added up. How do you see it? (..) [0:11:44.6]

LINE MANAGER: I think so. I am just thinking about whether I can find anything. What? I don't know right now. Now I am thinking about non-core development has no PSP. Thats something we have. For us, everything can be assigned to a project or project work. So I am just thinking, do we have anything where we... [0:12:03.4]

INTERVIEWER: The examples here are NLP or winning attitude, which are very specific and certainly not something every team does. [0:12:10.1]

LINE MANAGER: Yes, of course. [0:12:12.0]

INTERVIEWER: It's in there somewhere. Maybe an hour here or there. [0:12:14.5]

LINE MANAGER: That's it again. [0:12:16.0]

INTERVIEWER: That's exactly what you can argue about. Is it a team exchange or is it a project?

Exactly. Yes, all right. [0:12:21.6]

LINE MANAGER: Okay. Right. Then it happens. Exactly then. So I understood correctly? Yes, exactly. No, that's fine. [0:12:27.9]

INTERVIEWER: And if you look now. Okay. We have 1234567, 7 to 9. Depending on how much you want to define specifically here at the bottom. (..) Would you say that's too many aspects? If I click on Category here and just pop it up as. (..) [0:12:47.0]

LINE MANAGER: So, right at the upper limit. I wouldn't do any more than that and would rather see if she'll merge. [0:12:53.0]

INTERVIEWER: Okay, so define eight (...) as the maximum here. All right. Yes, I think that's good. Good feedback. Okay, now let's move on to the next step, so to speak. To the output. So the goal is again to look at the feedback somehow. We want to identify measures that we can then implement or use to denounce the RT. Insert action required here. (...) Dashboard simply aggregated. We have a trend here of what is core? What is non-core? Just to see with the average number of average users, where we might have built up overtime? Okay. Where do we need change? So, this is inefficient and ineffective and here it is also divided into categories. The idea behind it is really just: Is everything roughly okay? Do I have strong triggers? Is it more in the core or is it more in the non-core, relatively distributed, where you actually have a need for change and then identification of the right one? (...) The right thing in the right category. For the deep dive, okay, I'll look at 40 hours here somehow. In administration, people find it inefficient and ineffective. What is it? Yes, that means I identify three categories and then jump into this Excel deep dive. May I ask you. [0:14:29.6]

LINE MANAGER: Going back two slides again, to this query. Where do I put that? Do I enter efficiency somewhere there, or... [0:14:37.9]

INTERVIEWER: That's above this one. [0:14:39.6]

LINE MANAGER: Is it efficient? Is it effective? Okay, but I can't do that. Theres no percentage or anything like that. The question is, if, if, if. If I actually spend five hours developing software, but two of those hours are spent waiting for the tool, is that automatically inefficient or is it... [0:14:58.9]

INTERVIEWER: So that would be part of the training, how to fill it out. If (...) such a case occurs, then it's best to say, okay, I've now developed well for three hours, and two hours were inefficient. Why? Because I had to wait for those two hours. [0:15:16.1]

LINE MANAGER: Okay. [0:15:17.9]

INTERVIEWER: It could also be that three hours were good work and the rest was administrative problems, right? I was waiting for my colleague. [0:15:24.5]

LINE MANAGER: But that means if I spend a quarter of an hour looking for a parking space, then write that down. Then I have a single task. [0:15:29.4]

INTERVIEWER: I think that's the point. You would leave out a quarter of an hour, you would swallow it and only report it after half an hour. Or you say, okay, maybe parking is a single specific thing because we want to pay close attention to it. Then you might write it down for the quarter of an hour, but generally speaking, once 15 minutes becomes half an hour, you don't write down every little thing. [0:15:49.5]

LINE MANAGER: It's important to provide guidelines like that. So, what is the time granularity in which I have to enter things (...) and. And maybe then also say, what do I know, when I know something, do I start some kind of tool? What? What? What? Takes five minutes to start. And I do that three times a day. That I still have the opportunity to somehow address it somehow. [0:16:12.3]

INTERVIEWER: You could also write it down somehow. Okay, 15 minutes in total, then you write it in an explanation field, you have to start it five times, ten minutes in total each time, okay, but you say temporal polarity. Does that mean zooming out after half an hour, or? [0:16:28.1]

LINE MANAGER: Yes, that's right. Smaller doesn't work, smaller. [0:16:31.1]

INTERVIEWER: Okay, all right. Very good. (..) Yes. [0:16:37.7]

LINE MANAGER: So, I have to find a trade-off. Between. Between slot, duration, or intermediate unit of granularity? Yes, and? I have the time expenditure every time. [0:16:50.8]

INTERVIEWER: Five clicks and then describing it. [0:16:52.7]

LINE MANAGER: Yes, exactly. [0:16:53.2]

INTERVIEWER: Yes. I think half an hour is fair, but still give them the option to add things up. Then it adds up at the end of the day. I wasted three quarters of an hour on this and that. Okay. (..) Back to the output again. General overview, just to then jump into the deep dive, filter on an activity, and then in this detailed exploration, okay, what was it now, what did people report back here? Efficient, effective, and then in the explanation? These are just examples I entered manually to see the real feedback from employees. It says (..) Follow up Core, I had to wait for this meeting, or I walked to the car, it wasn't charged. The result is somehow penalties for; an uncharged car can be traced back. Whatever the feedback from employees is. (..) Do you think that from this mixture of output and input, you can deduce measures for action? That's also a question of whether it's filled in in such detail. Most likely, you can then extract measures for action from it. (..) [0:18:11.2]

LINE MANAGER: So again. If you do that as a model, yes, for a limited period of time, then I think it can make things transparent that are actually already known. To make it even more objective, perhaps. Because it's different when (...) I go to my boss and say, I don't know. We've had so many problems finding parking spaces again, and he says: "Oh, how nice"; But when I tell him, I don't know, how can I prove that we have. [0:18:36.5]

INTERVIEWER: 15 hours a week, 15. [0:18:38.1]

LINE MANAGER: Hours spent looking for parking spaces per week. [0:18:39.9]

INTERVIEWER: Christian Okay, so that means something new will come out of it? Probably not. But quantification and, as a result, awareness within the hierarchy will also be noticeable. Okay. (...) If you now take that and everything else. [0:18:57.0]

LINE MANAGER: So, a big issue for us is processes, i.e., additional new processes, yes (...) and also making it transparent again how much time we need to (...) what kind of approval, how, how much process time is there for any tool filling? Yes, regulations are also included in some way. So, from that point of view, that's now taking up a large part of our work. Yes. (...) [0:19:23.7]

INTERVIEWER: All right. (...) When you look at this overall construct, I think your feedback was that if it remains brief, then it can be accepted, so to speak, on the one hand. And it brings transparency to the things we know so far. To get push into the organization, would that be a summary, so to speak, of the current status of the tool or the idea? Yes, all right. [0:19:55.9]

LINE MANAGER: So, I would still consider simplicity to be a criterion. Yes, when you mentioned an app. I would actually see it as an app or something like that, if necessary. [0:20:04.7]

INTERVIEWER: So mobile. [0:20:05.8]

LINE MANAGER: Mobile, not general, because many people are, I don't know, on the road for two hours and then don't necessarily come back here to use a computer or something. [0:20:13.8]

INTERVIEWER: Yes, okay. (..) Do you have other points where you say, hey, that's just how we always see it, other tools, that's nonsense, it works. Where else do you see one overall? Maybe not in the first application, but also a look into. We do MVP and then there's a second version or something. (4) [0:20:40.1]

LINE MANAGER: Like I said, as simple as possible. And maybe some others? I don't know. Is there any support from the calendar or something like that now? Yes, I know that. When I. What do I know, when I. When I am in Outlook. So, let's not take my Outlook calendar as (..) but if someone has a calendar that's somewhat similar to mine, but where I now have appointments for an hour and a half, then yes, it could pop up again on the app right after the appointment. The conclusion of the meeting was actually about the project or something like that. Yes. [0:21:06.9]

INTERVIEWER: Yes, very good. We definitely have that on our radar. And it's great that you say I think an Outlook integration like that, if it works, can be a huge help to the people who maintain it. You don't have to accept it if you don't maintain it. Yes, all right. I'd say that's it from my side. Thank you very much for the brief exchange. Yes, you still have that. Last (...) statements in the interview. [0:21:33.3]

LINE MANAGER: No. [0:21:34.0]

INTERVIEWER: All right. [0:21:34.6]

Transcript Interview 4 – IT Architect 29.10.2025

INTERVIEWER: So again, Name IT-Architect, is it okay for you if I record this, data only be used for the thesis and to further develop the tool afterwards, it will be deleted. No names be shown. [0:00:14.9]

IT-ARCHITECT EXPERT: Yeah, sure. [0:00:16.4]

INTERVIEWER: All right. I think you know a lot about the, topic by now. But just to freshen up or give a quick summary. Again, we have this a lot of steering problems in the Rd where we don't know where people are working in and have compliance issues. This is combated with a new detailed time tracking structure in Ms. where the project hours are tracked. But we also want to find ways and create efficiencies. And here comes this new now called feedback for Efficient and Effective Development FEED tool in It's an app based on like lean frameworks. To develop. Yeah. Or to track time and give employees the feedback opportunity to showcase the waste and also give, improvement features. It is not at all a performance evaluation of individuals and only identify structures, trends and inefficiencies. The cycle is around two weeks with at least more than six people per team. All personal data is pseudonymized or deleted. Employees enter the activity daily and also their time, and then have to answer a questions for efficiency and effectiveness and write a little summary if it's not effective, to say what went wrong and how they could improve it. Obviously I told you a lot about it before, so I don't think you need much more detail. But if questions come up, we can also discuss it in the next steps. So now to you. Can you give me a brief description of your role in the IT department, what you do and maybe your background. (..) [0:02:01.8]

IT-ARCHITECT EXPERT: So my role is mainly as a solution architect. You know, in Mercedes we have a clear separation of roles, especially when it comes to the security topics. You know, we have something called, Isa or information security Architect, right? And normally each department has their own Isa. And sometimes I've also heard about terms like business information security architect, I guess, you know, one focusing on the business side, one focusing on the IT side. So, these are the people who work very focused on security topics, like for the whole platform, for the tool building, the security profile, identifying what personal data is stored and all that, and working more with system security and so on. But my role is focused more on development of the product, steering the development team, building the right architecture, building cost effective solutions and mainly acting as a liaison between the business teams and the development teams to translate the business terminologies, the business requirements to the implementable technical requirements. This is where I come in. And right now I also focus on this whole ongoing transformation. Transformation is again as a solution architect here I provide a bit more, at a higher level guidelines, best practices, guidance for the teams to, transition between the old technology stack to the new technology stack and how to handle problems, migration challenges and so on. (..) [0:03:55.0]

INTERVIEWER: Sounds good. Thank you. In your time at Mercedes, or even before that, Did you ever have, experience in having to track your time yourself, or your projects and stuff like this? [0:04:11.0]

IT-ARCHITECT EXPERT: Actually in Mercedes? Never, honestly speaking. But because I come from India, I started, as a consultant. Right. And in India, time tracking is, is not a, not a big deal because it's very common. It's, also it's not based on huge bureaucracies or privacy laws or unions. It's not so, dominant like here in Germany. So there of course, we had to prove, even though we swipe and swipe out for eight hours, there were situations where we were asked to say, okay, give me a list of tasks, what you worked on for, you know, the eight hours of the day. Yeah, but I think so in my opinion. What? Based on what I have seen, it's more common in countries like India. In Germany, this is actually very new or I've not really seen such extreme

measures. I mean, but I do understand that it could be required. But yeah, then come the loss into the picture. Right? [0:05:26.6]

INTERVIEWER: Yeah. Of course, the laws play a big part. All right, let's jump into the difficulties. More into you as an architecture expert from your perspective on the rather similar but still, yeah. Delicate situation with the personal data. What are in the architecture? The top security or privacy risks that you see from this, from this tool? [0:05:58.9]

IT-ARCHITECT EXPERT: I think. I think the main, main, thing is, again, tracing back to the employee, right? I mean, I know it's not exactly, it security risk or something, but it's definitely a privacy risk, especially for the employees. (..) So it's very important that we are trying to, somehow consolidate this and prevent re-identification or, like, tracing back, I think, with different measures like aggregation. First of all, more importantly, the pseudonymization that you already mentioned, right. Not really having the names or employee numbers or something. And then also avoid really the any sort of trace back. One more point that comes to my mind is also when, even if at all the employees agree to enter these feedback and their tasks, we probably need to somehow suppress it or generalize it. If there is a lengthy feedback, you know, so. [0:07:13.2]

INTERVIEWER: So a word limit? Possibly. [0:07:17.4]

IT-ARCHITECT EXPERT: Exactly, exactly. Word limit. Exactly. That would be a good way of already limiting the input so that they don't really provide such a detailed, input, which can in the end, you know, come back to them. [0:07:31.2]

INTERVIEWER: Obviously, you want to find the sweet spot there because like the more feedback and more detailed saying what actually went wrong or improvement measure is goodbye. But I totally agree. If first it has to come the privacy there of not being able to trace back. [0:07:49.9]

IT-ARCHITECT EXPERT: Exactly. Because even if it is only six members, you know, I mean, I think every team lead, if he is paying attention, he knows what his team is doing. So it could be very easy also to track trace back. You know, so it would be good to kind of suppress it and maybe put it into some sort of buckets. Even in terms of the task buckets. Right. Okay. So meetings, project work or something like this, and then only the feedback should be captured in terms of, okay, it's not efficient. Why do you think it was not efficient. So in this way we can focus more on making it efficient rather than making the employees feel like, oh, we are collecting some data about you, you know. [0:08:37.1]

INTERVIEWER: Yeah. Very good point. And I think that that's already covering the second part. Like what prevention measures I think somewhere in the IT and architecture design side of it. But some are also in the how do you, explain people to use the tool correctly. Because this is also playing a part and, What other things come to mind? Would you push this cohort size higher than six or have other thresholds in there? To have this not tracing back stronger like one you obviously mentioned just now the word limits or reducing the amount people give information there. [0:09:20.7]

IT-ARCHITECT EXPERT: Yeah. [0:09:21.5]

IT-ARCHITECT EXPERT: I mean, so from the IT side, it's important to set up proper and very strong, security roles. Right. Like, of course the developers will have access, but once the application is live, even very limited number of people should have access to the data. And even if they have access to the data because of the pseudonymization. (..) We should make sure that the proper pseudonymization or the proper masking techniques are applied so that even anyone, even the support guys, any techies who are accessing the data, they are not able to,

point. Okay. This feedback is from someone, and mainly in terms of the, for example, the cohort size and the word limit and so on. During implementation, it's important to set these limits and the validation rules in the tool so that in the front end, when the data is being accessed in any sort of, chart or whatever, the data is only aggregated and also only fetched if it is more than the cohort size, you know, for example, six should we increase the cohort size? I don't know, I can't really, talk about that. I mean, I think there are maybe different aspects to that, but restart whatever, whatnot. Right. So, yeah, maybe. [0:11:02.6]

INTERVIEWER: You spoke about roles. So there obviously is then the, the different roles we have this RDP, the, the, the team that initiates it and gives the line managers access to start the, the, the FEED tool. Then there's the line manager who picks out the, the people, the, the participants, the individual categories and then sends it out. And then there is the actual participants who put in the activities. What other clear roles do you see? Is it the IT expert, or do they fall in with the RDP as the overall owners of this tool, or would you exclude RDP as an owner and just leave them as an initiator? Kind of stuff? [0:11:53.9]

IT-ARCHITECT EXPERT: No. [0:11:54.3]

IT-ARCHITECT EXPERT: So I think we need to define the clear hierarchy. So normally what happens is every product has an operations team who takes care of the running of the system. Right. And let's say the support guys. Right. So, they will have much more access. In terms of I don't know, connecting to the database, looking at the tables and so on. But they should obviously be also very restricted and very strict on the production environment. And we should follow very much the principle of least privilege. So, which means then the participants have access to only their data. You know, then e-4s have access to only his employees or the IDs that he's given. Nothing more. Right. And then, similarly, we may need to set a hierarchy. The owners, as you say, the initiators, they can have data of multiple. E force and so on. But I think, again, we need to design proper, rules based on the kind of aggregated data that each of these levels want to see. (...) [0:13:14.9]

INTERVIEWER: So sounds very reasonable. And I think this operations team and also the least information possible is probably, a thing that has to be underlying all the decisions taken in the development steps here. Just jumping on. If we look at like, we discussed it also a lot that this product or this tool could have a lot of integrations, outlook, SEM, HR, data, Ms. Connection, whatever. And it would make it nicer in a usability concept. But what's your recommended integration scope for a Minimum viable product for a first launch idea. (..) [0:14:01.4]

IT-ARCHITECT EXPERT: So, I know MVP could be a very, focused, or very small, like the least, functional application. Right. But at least the one integration I would see is important is, the HR data integration just so that the employees can be selected rather than, like having to type out the details or, or to paste the emails or so on. I mean, if we are doing a very targeted MVP, like, okay, hey, I'm going to start with like one E4 and his team and then or I'm just going to we are just going to try it out with a bunch of email IDs with like as a, as a trial. Sure, we could do that. But if we want to really at least expose it to like a couple of teams, couple of E-4s and little further and so on, HR integration is good, I think. Outlook ZEM. These are all I mean sorry, maybe (..) It could also mean it's a outlook integration. I don't know whether we need the HR data, of course, because we don't really need the, like personal data. Right? We only need the connection of the, like the link between the manager and the team. That's all that we need. Yeah. [0:15:32.8]

INTERVIEWER: And then obviously the mail connection behind it so that the manager sees, okay, I have those eight people to pick out from, and then he can just click on six to 7 or 8. He wants. Yeah. Yeah. [0:15:46.3]

IT-ARCHITECT EXPERT: It could probably be sufficient with outlook because I'm pretty sure outlook is also integrated with the HR data and the org chart. Right. Yeah. So, directly doing this integration, we would already fulfill this requirement. (..) [0:16:03.1]

INTERVIEWER: Sounds good. While we're already in the usability and acceptance topic to make it more, more seamless. Now looking at the actual participant from your expertise, what are the most important features to achieve like usability, but then also acceptance of the tool because it at the first step, it is an extra time, spent for the developers. [0:16:33.8]

IT-ARCHITECT EXPERT: Right, right. So, because of this, like what you said, it is obviously. So, I thought this the same ten years back, or whenever I was feeling such things, I was like, look, I'm already spending so much time on the project, and now you want me to track hourly activities, right? So, I think the easiest is to make really the time buckets already. Like, decide on the time buckets. Do you need to know every hour or every two hours or just like three major activities or three major, time spent on three major activities per day? Make the buckets and make the interface so easy that really, the developers or the team doesn't have to spend a lot of time on doing it. So, for example, if I log in today, show me today's section directly. You know, and maybe making it like, as you said, usable. So, with easy scrolling, going back to the previous days or enabling a calendar selection just so that I can click on it and then input my data. And I think, in your design, you already had something like a toggle button effective, not effective. Or checkboxes. You know, I mean, I think a good, UX experience will, will definitely go a long way because, then and again, I think, coming back then here, the word limit also matters because then if we know it has to be like, not short. So, we could say, like, it has to be, I don't know, like greater than five words, but less than 20 words. You know, something like this. I guess it depends. Like we need to take some examples and experiment it out, just by writing it or typing it and checking some examples of tasks. But if these are made clear, then we also know that we don't want the employee to spend. Really? I don't know, five minutes in describing like, a 50 word, or a 80 word essay or something. [0:18:56.0]

INTERVIEWER: Yeah, yeah, I think there will always be people who abuse it on the low side and write nothing. And if you say five words, they will A, B, C, D, E, f. And some people who try to do more and maybe give two, two feedback, two feedbacks for the same time, just to have more writing space if we limit it to 30 words. But I definitely see your point as the time is coming to an end. (..) Let's focus on like 1 or 2 last questions here. (..) When we look at the, the setup and what do you see as like a critical path and critical steps that need to be taken of course, considering that it's underway. I think we have a talk on Monday with them. But what else, architecture wise, do you see still critical, clear role definition. I think being one and, Yeah. [0:19:56.8]

IT-ARCHITECT EXPERT: So, you mentioned it already. So, most of the times in developing these products, both the business side and it side, I think we missed the authorization or the security concept. So, like you said, the role definition is part of the security concept. Right? But I think it's better to really, put it out there on paper and describe it and say these are the different categories of users and these are the different categories of data access that they will have. And based on the least privilege, principle of least privilege, you know, describe okay what data who will have access. So, when we really describe it out and make a security concept out of it, considering the nature of this application, I would say that's the only, critical part because otherwise the application itself is majority. I think it's more, developing the front end. The back end is pretty simple. And then the interaction between the front end and the back end, it's more like rules. That's not a real problem. [0:21:12.7]

INTERVIEWER: All right. Thank you very much. And I think with that I'll give you one last time on the floor. Do you have any other inputs, concerns, questions? Things you want to add? (...) Or not? [0:21:29.9]

IT-ARCHITECT EXPERT: Not really, I think. I think I expressed all, I had in mind because I did, think about it. Maybe, again, consider the post go live plan or the support process. How would it look like? You know, in general, because I'm thinking about it in terms of a business requirement. Is, good already to have a plan. So, then we can describe this, when we start the project itself and make a plan on how to have the timeline. Okay, this is the development timeline, and then it goes to a support phase. (9) Yeah, that was majorly it. [0:22:24.8]

INTERVIEWER: A little cough there at the end. Name IT-Architect Expert. Thank you. Now you. (..) Take a sip of water. You're muted. (..) [0:22:37.8]

IT-ARCHITECT EXPERT: I need to get some water. [0:22:38.9]

INTERVIEWER: Yeah yeah yeah yeah. Get some water. I'll let you go. Thank you so much for your time and your expertise. Have a good day and enjoy the tour. Two jobs at the moment. [0:22:51.1]

IT-ARCHITECT EXPERT: Thank you. Paul. Take care, take care. Bye bye. [0:22:54.2]

Focus Groups

Focus Group 1 – 29.09.2025

Memory protocol – „Exploratory Interview / Open Interview / Focus Group"

- **General conditions**
  - 29.09.2025, 15:30 – 15:55 Uhr
  - Sindelfingen, MTC (059), 50-1-Sichel_10.o069Ort
  - Participants:
    - Name – E3 level – PLE SW
    - Name – E4 level – SW Expert
    - Name – MB.OS Gen2 Process Architect
    - Name – E3 level – Lean Expert SW
- **Structure of the meeting**
  - Short Re-Cap of the overall RD Steering Model & Introduction into the new Dashboard for PLE.
  - Transparency of resources invested on projects
  - Introduction into the FEED-App
  - Discussion about next steps, interests in overall RD Steering Model as well as FEED-App

1. Strong interest in FEED as a lever for real improvements

- Lean Expert SW: "What are the drivers that generate overhead?" – clear diagnosis necessary; without a fact-based view (FEED), concrete improvements cannot be implemented.
  - Wants to use FEED to highlight unnecessary/inefficient activities (meetings, IT tool friction, governance efforts, etc.) and derive measures from this.
  - Questions about the chain of effectiveness: What is FEED? What measures follow? Are these implemented and tracked?
- Developer impact (general tenor):
  - Desire for noticeable relief in the line (fewer useless appointments, less double entry, fewer tool obstacles).
  - Expectation: More direct project time/deep work time by eliminating typical "time wasters."

2. PLE perspective, controlling & transparency

- Project Lead SW: Hours must be recorded accurately for each project; more precise writing helps, but: "Where does the waste go?
  - Note: Without adapted basic logic in controlling (matrix/system center), efficiency gains do not flow back into budgets → otherwise there is no financial effect. -> Addressed in the "inconvenient truths" of the RD steering model.

    - During the year, the PLE currently has no complete overview and no leverage (line budget is “stuck”). PMCE should be integrated; PLE should be taken into account in annual distribution/project leading dimension.
- PLE SW: So far, only internal capacity comparison – no benchmark to EDL; Starzynski asks about best-of points. Team suggests keeping focus internal for now (PPM curve, internal transparency), benchmark possible later.

3. Compliance & Governance

- Compliance note: “Issue when we divide hours by 12” → Avoid personal evaluations; ensure aggregation/anonymization (e.g., minimum number of participants, only aggregated E4 level, defined deletion periods).
- Learning from EDL: 2 pilots + compensating controls are recommended (safety net to mitigate risks in the introductory phase).

Preliminary agreements/trends

- FEED app yes – as a diagnostic entry point to derive concrete, actionable measures for developer time savings.
- Transparency: PLE dashboard is viewed positively but must interact with budget logic (otherwise “toothless”) & already have similar dashboards for transparency in their software areas.

Focus Group 2 – 03.11.2025

- **General conditions**
  - 03.11.2025, 08:00 – 09:15 Uhr
  - Sindelfingen, MTC (059), Gebäude 20
  - Participants:
    - Name – Workers council coordination R&D – Workers Council RD
    - Name – Workers council coordination IT – Workers Council IT
    - Name – Lean Expert (E4 level)
  - Update RD Steering Model & Communication E-Mail towards employees, Introduction of Concept of FEED-App, Discussion on Security & Involvement of Workers Council in process
- **Structure of the meeting**
  - Short Re-Cap of the overall RD Steering Model & Discussion on the communication e-mail towards employees for new accurate time tracking mandate via RMS
  - Discussion on specific details based on time-tracking for RMS
  - Introduction into the FEED-App
  - Discussion about involvement of works council next steps, interests in overall RD Steering Model as well as MMA-App

1. **Interest in FEED as a lever for obtaining detailed inputs as RMS**

Strong interest in documenting the time spent with colleagues/service providers from India (MBRDI) with data and, ideally, also posting it back to India.

2. **Continuation driven by PX / not left to the specialist departments**

The focus was on tracking and monitoring the results.

This should not be handed back to the specialist departments – otherwise nothing will be done with it.

Therefore, RD/PX should take the lead but not take over, as it can quickly become too much in terms of data and effort. “Don't become accountants.”

3. **Workers' councils do not need to be involved in everything**

Not every step supervised by BR, RD/PX can create guidelines, confirmed by BR and then BR can be out of the loop for the individual FEED processes

Preliminary agreements / trends

- FEED app yes -> Further development & design of the follow-up process is important
- BR involved in the development of guidelines, but then withdraws from the process

Focus Group 3 – 04.11.2025

- **General conditions**
  - 04.11.2025, 10:00 – 10:55 Uhr
  - Sindelfingen, MTC (059), 50-1-Sichel_10.o049
  - Participants:
    - Name – E2 level – Performance Expert
    - Name – E3 level – Controlling R&D
    - Name – E4 level – Efficiency R&D
    - Name – E3 level – IT Expert 2
    - Name – E3 level – PLE Compact
- **Structure of the meeting**
  - Update RD Steering Model Timeline
  - Introduction FEED-App initial concept set-up
  - FEED-App management input & follow-up process of FEED
  - Next steps & Final Questions

1. General mood was very positive – waste exists & is not transparent -> something needs to be done here

- Controlling R&D: Needed – addition to RMS
- PLE Compact: Very good approach, but we need to pursue it further & not just create transparency
- Performance Expert: Could be used to quantify lost time due to "supplier fuck-ups" & possibly reverse charge them.
- It was agreed that the first step would be to create transparency, and then possibly initiate the next steps (examples: reversing costs to suppliers, suppliers, or hubs).

1. Follow-up process for the FEED app

- Controlling R&D: FEED only as a tool & 6 months later. An option for review/follow-up would be a Menti query to see whether managers/teams have implemented anything.
- Performance Expert: Risk of enormous effort if 10 teams go through FEED per week. This would not be the case in the initial ramp-up, but would arise with scaling.
- PLE Compact: Objection – no follow-up & support in the decision-making process leads to responsibility being shifted. A pending item is needed for sounding & deciding on measures.
  - If this is not in place, teams left to their own devices can lead to a huge drop in acceptance. This only results in additional effort and a review after 6 months, with no positive change.
- Efficiency R&D: Objection – no detailed decisions & true challenging of the status quo if no "external" people are involved in the sounding/decision-making process.

    - An example was pilots who only came up with concrete measures after being challenged by Lean Expert.

- Performance Expert & Controlling R&D: Have been convinced and now consider a general affirmation of the sounding and decision for measures to be acceptable/correct, but do not yet know who should drive this forward.
- Suggestions for sounding: Operational Excellence from the Mercedes Excellence System team (Operational Excellence) & or the Transformation Office (RD/R).
    - RD/PX is not necessarily in the lead. Initially yes – then handover to the organization.

2. Next steps & final discussions:

- Further development & testing within the team as soon as possible
- Security check to determine whether complete storage of all data & comparison are possible.
- Note: BR must approve the FEED in each case, as it is based on a TSA -> However, written information is sufficient here.
    - If data is now to be stored & overall comparison of the RD -> multi-moment recording of the overall RD -> then BR & data security problem