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THE FUTURE OF RETAIL BANKING

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Based on the CEMS-MIM Business Project:

UniCredit – The Future of Retail Banking

A project carried out under supervision of:

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Abstract

The Future of Retail Banking

Goal of this Business Project was to identify the services that the retail bank of the future will have to offer. An explorative research was conducted to predict and analyze future needs individuals will have. Based on those needs, potential future services were identified and ranked in a portfolio analysis according to their attractiveness, feasibility and unitary profitability. The highest ranking groups of services were then combined in three business model clusters: *Bank at the Branch*, which suggests novel ways to use existing branches of the bank, *Bank with You*, an innovative application of technology to exploit payments, and the *Bank of Things* that brings together the opportunities of Internet of Things with banking.

Keywords: innovation, retail banking, organizational strategy, new product development

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1 Brief context

Together with five other students and under supervision of Prof. Vincenzo Capizzi, Full Professor of Banking and Finance at SDA Bocconi School of Management, I was working on developing the *Future of Retail Banking*. Over a period of roughly three months we researched the needs, customers will have in ten years' time, and how UniCredit retail bank could leverage on its resources and capabilities to satisfy those needs.

1.1 The client: UniCredit Management Consultancy

UniCredit Management Consultancy (UMC) is the in-house consultancy of UniCredit Group, a global banking and financial services company with headquarters in Milan, Italy. It was set up in 2007 to provide the UniCredit with high standard management consulting services (UniCredit 2016a). In cooperation with UMC we were working on recommendations for UniCredit's retail business, which is operating in 17 European countries with more than 6,800 branches and over 124,000 employees. It offers services around saving, lending and transaction of money, such as savings accounts, current accounts, mortgages, loans, debit and credit cards and advisory services on financial planning (UniCredit 2016b). Project sponsor was Giovanni Miserotti, Engagement Manager at UniCredit Management Consultancy. Mr. Miserotti joined UniCredit in 2013 before having worked as strategic marketing manager for GE Capital and consultant at McKinsey & Company.

1.2 Market overview

The retail banking market in Europe includes all products and services offered by banks to individuals and families. Not included are services that are offered to small and medium businesses due to the focus of our project and high-net-worth individuals as they fall into the category of private banking. The market itself is at the same time an international market with big players that are present in multiple countries, but also fragmented with many small banks

with a regional presence and focus. European retail banks are experiencing a small wave of consolidation to boost profitability and cut regulatory capital requirements (Oliver Wyman 2016). In comparison with the other major European retail banks, UniCredit is positioned well, not having the need to re-capitalize or acquire new businesses (Financial Times 2016b). Compared with the US counterparts however, UniCredit lacks cost efficiency. From the consumer perspective, brand image and reputation are more important than ever, in the light of potential bail-outs and bail-ins (Financial Times 2016a).

1.3 Client situation

The retail banking industry is struggling from increasing cost caused by the new Basel III regulatory framework. The higher capital reserves that are required directly translate in lower profitability that requires actions.¹ At the same time, the monetary policy of the central banks in Europe and the United States with interest rates close to zero for short-term lending and penalty interest for banks that want to store money at the ECB even increase the cost pressure (European Banking Federation 2015).

There is one development however that may exceed these two effects by far in significance and impact. A new era of customer needs and behaviors is emerging, digitization and other trends are rapidly changing the retail banking landscape. *FinTech*, a short form for Financial Technology, describes an industry formed of start-ups that are using technology to disrupt the financial system by making financial services more efficient and convenient. Those start-ups and digital billion dollar companies are customer-centric and quick in adapting to a changing market environment and represent one of the biggest challenges for traditional banks (Capgemini 2016).

¹ e.g. Deutsche Bank planning to sell its retail banking business due to low return (Financial Times 2015)

1.4 The Business Project challenge

Goal of the Business Project was to show which role a European retail bank should play ten years from now to remain competitive. The challenge was to predict future needs and conceptualize ways how those needs could be served by UniCredit. This included identifying potential future services and business opportunities, assessing their attractiveness and feasibility and describing the value propositions and characteristics of the most relevant services.

2 Reflection on the work and individual contribution

The Business Project was structured in three phases that followed separate research questions. *(1) The Customer of the Future*, *(2) The Services of the Future*, and *(3) Future Business Models*. In the following, I will present those phases with their problem definitions, underlying methodologies, results and potential shortcomings.

2.1 Problem definition

Tackling the right problems means asking the right questions.² We developed three basic research questions for the three phases of the project to guide our research.

(1) The Customer of the Future: *What will people do ten years from now?*

The problem definition of the first phase was open ended and intentionally detached from the peculiarities of the (retail) banking industry. It should not be limited by service offerings of competitors or the current resources and capabilities of UniCredit. The purpose of this phase was to predict future needs, and identify which opportunities could derive from that.

(2) The Services of the Future: *How can UniCredit satisfy future needs?*

In the second phase, the task was to scrutinize the long-list of potential ideas for future services to create a shortlist of the most relevant services that should be pursued by UniCredit.

² “Asking better questions delivers better results” – Dwayne Spradlin, CEO of InnoCentive (Spradlin 2012)

(3) Future Business Models: *How should UniCredit implement the changes?*

The third phase dealt with the design and implementation of the selected new business models. Goal was to make them tangible by highlighting their characteristics, value propositions, customer journeys and rough financial estimates.

2.2 Methodology

This subsection describes the hypotheses we based our methodologies on, the methodologies itself and the analyses we carried out for the three phases of the project.

(1) The Customer of the Future

Hypothesis — The underlying hypothesis of the first phase and foundation of the whole Business Project was that customers' future needs will differ from their present ones.

Methodology — This phase revolves around needs. Needs cannot be observed, but needs drive behavior, which in turn can be observed and analyzed to detect the underlying needs (Peppers and Rogers 2011). Therefore, as a first step, a set of key activities individuals engage in was identified. Through secondary research trends that affect these activities were collected and subsequently grouped and analyzed to deduce the main trend drivers across all activity clusters. Those trend drivers were then applied to the different activity clusters to extrapolate potential general future business opportunities. The resulting opportunities were grouped based on their similarities and analyzed regarding potential points of contact with the bank alongside the categories *Transactions*, *Loans*, *Investment/Savings*, and *New Business*.

Analysis — We identified eleven relevant areas of activities: dealing with public administration, mobility, shopping, eating, communication, leisure, working, education/studying, health and personal care, transactions, and house holding. Within those categories we conducted secondary research to understand the respective trends and developments. After having obtained

the overall view of innovation within the activity categories, we then were able to deduce seven trend drivers that permeated all of them:³

- **Customization:** Customers will expect tailor-made products and services that address their unique needs.
- **Flexibility:** Life is becoming more complex and fast-paced, products and services have to reflect this by offering flexibility instead of rigidity.
- **Simplicity:** User-centricity shifts the importance of products and services towards simple solutions. Firms who don't manage to adapt will be replaced by those who do.
- **Social Interaction:** The world is becoming more connected, products and services will incorporate this to meet the future customers' expectations.
- **Sustainability:** Transparency and comparability will increase the role of sustainability.
- **Velocity:** Time is more and more seen as a scarce resource and customers want to maximize their value by reducing or eliminating activities that waste time.
- **Safety:** As one of the primeval needs, safety will continue to have high importance within the individuals' hierarchy of needs.

Applying these seven trend drivers to the activity categories allowed us to come up with a total of 62 ideas for future products and services. For example, crossing the activity category *Mobility* with the trend drivers *Customization*, *Flexibility*, *Simplicity*, *Social Interaction*, and *Sustainability* led to *Smart Pooling* as one of the 62 ideas. *Smart Pooling* would allow individuals, when they are in a car (either their own, or a car sharing service or even shared ride services such as *Uber*) to be informed about the possibility to pick up a friend who is on the route and has a similar destination. This service would be custom to everyone's location, route and preferences, offer increased flexibility, because it would liberate individuals from the necessity of owning an own car or relying on the public transport system when traditional cabs or shared

³ For a detailed overview of all trends and innovations that led to these drivers see Appendix 1.

ride services are considered too pricey. It would be simple, since it would be completely automatic based on the tracking data and mobility patterns. It would leverage on the social interaction trend, which can be a true added value, especially for longer distance rides, and lastly it would be sustainable, since it would reduce the wasted capacity within the used cars. For an overview of all 62 ideas see Appendix 2.

In preparation for the second phase, *The Services of the Future*, the 62 ideas for products and services were grouped into 15 *groups of opportunities*. Those 15 groups of opportunities were then examined regarding a potential point of contact with the banking world, namely with any of the four different potential lines of business, the bank can engage in: *transactions, loans, investments and savings* and *new business*. Each of the groups was then investigated for business opportunities within those four lines of business, which resulted in a total of 36 future services. For an overview of this matrix see Appendix 3.

(2) The Services of the Future

Hypothesis — The underlying hypothesis for the second phase was that the importance of the different services of the future depends on their respective attractiveness and feasibility.

Methodology — In order to identify, which services UniCredit should pursue, a two-step portfolio analysis of their feasibility and attractiveness was conducted. In the first step, a simple high-medium-low evaluation of the services' attractiveness and feasibility was carried out. The services below a certain threshold were then excluded to derive a short-list of the most relevant future services. For those, attractiveness, feasibility and unitary profitability were assessed in greater detail.

The attractiveness component consisted of a market analysis that incorporated the approximate market size with a weight of 35%, market growth, worth 40%, and a customer perception analysis that was carried out in form of a survey and accounted for 25% of the overall

attractiveness score. The feasibility dimension on the other hand was made up by two components with equal weights, one being the “KSF-R&C matching”, an evaluation of a service’s KSFs and UniCredit’s resources and capabilities (R&Cs). The other one was titled “closing the gap”, and evaluated how long it would take to acquire the R&Cs to close the gap, availability of technological advancement and general speed of time to market. As a third dimension, unitary profitability was considered. Depending on the source of revenue, a service could gain plus points. Plus three for a fee-based service, plus two for an interest margin based service and plus one for long-term relationship creation). Relevant operating expenditure (OPEX) was deducted with minus one point, capital expenditures (CAPEX) was subtracted with minus 0.5, minus one, or minus 1.5 points depending on its size.

Analysis — Continuing with the list of 36 future services from the first phase, we considered three of them as ancillary services only, because they represented a channel rather than a product. Another 25 services were discarded because of a misfit with UniCredit’s resources and capabilities (feasibility analysis) or lacking economic upside potential (attractiveness analysis). Thus, we derived at a short-list of eleven highly relevant future services for the detailed attractiveness, feasibility and profitability analysis: *Brand Stores, Easy Transport, Internet of Things, Lifestyle-based Credit Score, Object Recognition, P2P Beacon Marketing, Payment on Recognition, Payment Protection, Proactive Loans, Functional Spaces* and *Virtual Reality*. For a full list of all 36 services see Appendix 4.

All of the eleven services are promising and should be considered for future implementation. Scope of the Business Project was however to provide a limited set of discrete and actionable recommendations for future business models and their implementation. Therefore, it was necessary to bring them into a relative order, which was done by applying an ordinal scale. For the attractiveness analysis an estimated market size bigger than €500m per year was re-

warded with three points, which was the case for *Internet of Things*, *Payment Protection*, *Proactive Loan Offering* and *Payment on Recognition*. A medium market size, (€100m - €499m) was evaluated with two points, everything below got one point. The evaluation of the market growth was based on secondary data and evaluated analogously to market size with three, two or one points for high, medium and low growth. Services with high growth were *Internet of Things*, *Proactive Loan Offering*, *Easy Transport*, *Payment on Recognition* and *Virtual Reality*. For the third component of attractiveness, the customer perception, a survey was conducted to ascertain the respondents' attitude towards the services, their willingness to accept certain requirements depending on the service, e.g. 'receive notifications' or 'track movements'. The customer perception score was adjusted upwards or downwards depending on the level of compliance. The last part of the survey asked for general demographic information and previous banking habits and experiences. The composition of the sample reflects the target group profile of the bank of the future with 85% of the respondents being between 18 and 34 years old and international (22 different nationalities), but with focus on UniCredit's markets. For a detailed overview of the descriptive statistics of the survey respondent see Appendix 5.

The feasibility analysis considered, to which extent UniCredit's R&Cs - information, reputation, processes, human resources and the physical network of branches and ATMs - were relevant for the KSFs of a certain service, and in case that there was a gap between the available and necessary R&Cs, how difficult it would be to close this gap. The KSFs depend on the service. For *Payment Protection* for example, reliability, security, reputation, processing of information, and partnerships with e-commerce sellers are key. Therefore, *information*, *reputation* and *processes* were assigned a high importance (plus three points each). *HR* and *physical network* were considered to have a low importance (one point each). The overall score of the R&C-KSF-matching is the average score of the five components, which in case of *Payment Protection* amounts to 2.2 points, the highest score among all services together with *Object*

Recognition and Lifestyle-based Credit Score. The gap analysis for *P2P Beacon Marketing* for example revealed that the missing resource is the development of an application with a connection to social networks, which could quickly be acquired by forming a partnership with an IT company. The partnership is a non-complex solution that is rewarded three points. Technical advancement and speed of TTM are assessed with three points as well, since the technology is already widely available and the only necessary action to launch the service is a marketing plan. Together with the 1.8 points from the KSF-R&C-matching, this leads to a final feasibility score of 2.4 points, the second highest after *Object Recognition* that scores 2.43 points.

The third component of the final ranking was the unitary profitability. The services that were fee-based and therefore able to generate enough cash flow to be self-sustaining were awarded three points. This was the case for *Internet of Things*, *Brand Stores*, *P2P Beacon Marketing*, *Functional Spaces*, *Object Recognition*, *Payment Protection*, *Easy Transport*, *Payment on Recognition* and *Virtual Reality*. Interest-margin based services were seen as the second best source of revenue and rewarded two points (*Proactive Loan Offering* and *Lifestyle-based Credit Score*). An additional point was given to services that supported a long-term relationship creation, thus increasing the customer life-time value. This was the case for *Internet of Things*, *Proactive Loan Offering*, *Lifestyle-based Credit Score* and *Payment on Recognition*. On the cost side, *Payment on Recognition* was the service with the highest CAPEX for the investment in technology development and deployment, and was deducted minus 1.5 points. *Object Recognition*, *Lifestyle-based Credit Score*, *Easy Transport* and *Virtual Reality* all require a medium capital outlay (minus one point), the remaining services require only low CAPEX, hence they got deducted only 0.5 points. Taking revenues and costs together, the service with the highest unitary profitability is *Internet of Things* with 2.5 points. The lowest ranking services are *Payment on Recognition* and *Virtual Reality* that scored 0.5 and 0.25 points respectively.

The results of the analyses were presented together with a description of the service and its KSFs on separate service briefs. An exemplary service brief of *Easy Transport* can be seen in Appendix 6. The highest scoring service overall is *Internet of Things* with 2.32 points. On rank two and three stand *Brand Stores* and *P2P Beacon Marketing* with 1.89 points both. For a detailed overview of the attractiveness, feasibility and profitability analysis as well as the final ranking see the scoring model in Appendix 7.

(3) Future Business Models

Hypothesis — The underlying hypothesis for the third phase was that the final selection of services to be implemented is affected by synergies among the services.

Methodology — The eleven shortlisted services were analyzed for their cost and revenue synergies. If there were mutually reinforcing effects on the revenue side, or the opportunity to share implementation or operating expenses, this was rewarded with extra points. Subsequently, groups of services were created depending on their synergies, and the top groups were examined in greater detail. The results were presented in a business model canvas.

Analysis — The synergy analysis resulted in three synergetic groups. **(1) Bank at the Branch** that contains the services *Brand Stores* and *Functional Spaces*, **(2) Bank with You** with *Easy Transport*, *Lifestyle-based Credit Score*, *Proactive Loans* and *Payment on Recognition*, and **(3) Bank of Things** that is formed by *Internet of Things* and *Object Recognition*. An overview of those services and groups in the attractiveness-feasibility matrix can be found in Appendix 8.

(1) Bank at the Branch

Bank at the Branch envisions a new perspective on retail banking, addressing not only the financial needs of the consumer, but also impacting the way they work and shop. It includes the ideas *Functional Spaces*, an offer that leverages on the future trend of smart working and *Brand Stores*, an offer of temporary experience shops. Regarding the dimensions of the business

model, functional branches are transaction driven, while brand stores are relationship driven. Both of them enhance the image of the bank. The services are predominantly not data driven, even though data can be useful to generate customer information. They are predominantly physical channels. A connection to digital services is required as facilitating or enhancing service for notifications of initiatives, room booking and payment.

Functional Spaces will provide access to furnished offices and flexible work points for employees and freelancers who need a place to work. The customer journey follows these four steps: First, downloading the app and setting up the account. Second, making a reservation depending on personal preferences and requirements (location and timeframe). Third, accessing the room through the automatic digital system that grants access, logs the duration of stay and charges accordingly upon exit. Fourth, the experience itself: During the stay, the customer is provided with basic services (Wi-Fi, coffee, sponsored gadgets) and has the opportunity to engage with the staff to ask for financial advice. The human resources that are required throughout those steps on the side of the bank are a data analyst, a centralized customer service team, an office manager, web advisors, and a cleaning service. The required technical resources and processes are an update process for the application, data collection, analysis of data, tailored marketing activities, and on-demand online advisory.

Target group are customers who need to work flexibly and perceive the pressure to set up multiple offices as a pain. They therefore want access to a temporary remote professional working environment. Building on this, the value proposition of the functional branches is to provide well-equipped, professional and flexible working spaces in the most convenient locations with easy access. The service should be communicated through a dedicated app and website, a social media campaign and billboard advertising in train stations. The distribution channel are the branches themselves. The development and maintenance should be outsourced. UniCredit's corporate clients should be convinced to partner up for promoting the service

among their employees (to special conditions that allow them to pass on the discount to their employees and make it a win-win situation).

The cost and revenue approximation suggests this service to yield an annual operating profit margin of 44% (€7m). It is worth noting that even though the profit of €7m might seem negligible, there is also the not directly tangible benefit of engaging with the clients in the branch and improving the customer relationship that will pay off in the longer run. UniCredit's branches measure on average 250 sqm, which allows 31 office spots per branch at 8 sqm per office space, a benchmark size for creative density co-working. Based on the assumption that 5% of UniCredit's 6,800 branches will be transformed into functional branches, UniCredit will offer a total of 10,540 spots in 340 branches. Factoring in a conservative average occupation rate of 30%, a competitive price of €20 per day and spot, and 260 working days per year, this leads to annual revenues of €16m. The annual operating costs of €9m are comprised of administrative overhead for the digital access and room administration system as the biggest cost bucket (€5m), infrastructure development and maintenance (€2m), real estate expenditures (€1m), insurance and security (€1m), and personnel expenses (€0.2m).⁴

Brand Stores describe the offering of temporary experience shops, where customers are encouraged to visit and try out new products and services from partner brands. The customer journey starts with becoming aware of the store and current exhibition, which is achieved either by passing by or receiving a push notification. What follows is the experience itself. Inside the shop, the person can see and try different products promoted by the partner brand. After trying the products, they can be purchased through UniCredit's *Subito Banca* online store. The sales assistants in the store will be provided by the changing partner brands. The necessary processes for this concept are the link with *Subito Banca*, and the changeover cycle within the stores.

⁴ The calculation of cost followed a benchmarking approach for the given cost categories

Brand stores target customers with the need to spend their free time in an exciting way and face the pain of limited available opportunities to do that. The value proposition of brand stores therefore is to provide exactly this experience in co-branded UniCredit branches, where customers have the opportunity to try, see and feel new exciting products. The communication takes place over the app and social media, as well as through offline marketing. Distribution channel are the existing branches. Partners are essential for this service. A diverse and changing selection of top brands needs to be acquired as partners. The installation and changeover should be outsourced to an external agency specialized in exhibition stand construction.

The cost and revenue approximation suggests this service to yield an annual operating profit margin of 49% (€115m). This calculation is based on the average rental price per square meter and month of €770 and an average branch size of 250 sqm. It is assumed that 5% of UniCredit's 6,800 branches, i.e. 340 branches, will be transformed into brand stores. Factoring in a conservative average occupation rate of 30%, this leads to annual revenues of €236m. The annual operating costs of €121m are comprised of administrative overhead as the biggest cost bucket with €54m, real estate expenditures (€27m), insurance and security (€14m), personnel expenses (€14m), contracting (€5m) and others (€7m).

(2) *Bank with You*

The *Bank with You* stands for the next generation of payment systems: paying without involvement of a dedicated payment transaction, i.e. cash-less, contact-less and actions-less. Tracking technologies (namely NFC and low-energy Bluetooth beacon) are combined with the bank's R&Cs of acting as a trust agent to facilitate payment transactions and store and process information to allow for an effortless way of payment. The bank then can make use of the information collected by the tracking of the clients to customize loans, adjusting the credit risk of its clients, and offer investment plans that are aligned with the clients' preferences. Regard-

ing the dimensions of the business model, it is a digital and transaction driven service, accumulating a vast amount of information about the clients, which helps engaging in long-term relationships. Thus, it is a data-driven business model, where customer data plays a crucial role to complete transactions in a safe and customized way.

The customer journey starts with the initial setup (app download, registration, introduction). The second step is the entrance tracking: When the client gets on a bus/train (*transportation*) or enters a shop (*brick-and-mortar retail*) this action is tracked through her NFC/beacon enabled smartphone and registered. It follows the on-site activity. In case of transportation that means that the client stays on the transportation vehicle until reaching her destination. In the case of B&M retail the client roams through the shop and selects the desired products. When the on-site activity is completed, i.e. the client gets off the public transport or leaves the store, the exit is tracked and the consumption or purchase is recorded. In case of the transportation the amount depends on the covered distance, in case of the B&M retail also the selected products are tracked and their purchase price is deducted. Next step is the payment facilitation. The client receives a push notification about the transaction details and has the possibility to choose among four options. She can either reject the payment, if it was wrongful, defer the payment; choose loan financing with personalized conditions, or decide to get charged immediately and have the due amount deducted from her bank account. As a last step, the bank provides its clients with a visualization of spending patterns, personalized loan conditions, investment proposals, saving strategies, and discounts and offers. The required resources and processes are an update process for the application, capabilities to collect, store, analyze and visualize the data, the payment facilitation processes, and customer service employees.

The service addresses the customer pain of queuing for the payment of products or services. Since the payment process has nothing to do with the desired customer experience and is perceived merely as an annoying means to an end, the service provides a clear and tangible

value added for the target customer, who experiences the need for simplicity, flexibility and velocity in his transactions. The potential field of applications ranges from shopping and transportation to parking, toll systems, concerts, and sports events. Partnerships in those domains are therefore crucial. Technology partners for the tracking solution and deployment of hardware are necessary as well. The communication will happen through UniCredit's app and social media advertisement, as well as offline in queues. The distribution will take place through UniCredit's webpage and the usual app stores.

The service is estimated to yield an operating margin of 68% (€265m). The total value of card transactions per year in the euro area amounted to €2.4tn in 2014 (European Central Bank 2015). This value was multiplied with UniCredit's market share in the respective countries (UniCredit 2014) to derive at €39bn as value of card payments that UniCredit could facilitate per year. Applying a market-based royalty factor of 1% on the payments leads to annual revenues of €390m. The operating cost of €125m are composed of expenses for ICT outsourcing (€41m), administrative & partnership expenses (€45m), and marketing & CRM spending (€39m).

(3) Bank of Things

The *Bank of Things* leverages on the connectivity features of Internet of Things devices to create a system that is able to predict upcoming transactions and automatically and proactively initiate payments. Those "invisible payments" are triggered by the real-time status, usage, and consumption of clients' personal devices (household appliances, connected vehicles, utility meters, etc.). Depending on the size of the transaction, there is the possibility to proactively offer a loan with personalized conditions, based on the lifestyle data that is collected from the devices. Those data can also be used to build custom subscription plans for consumable goods, propose loyalty programs with preferred suppliers, and send suggestions to clients for budget

allocation and promotion of positive saving behaviors. Regarding the dimensions of the business model, it is digital and transaction-driven as well as relationship-driven, because it combines transactions with a learning relationship. It relies on data collection and analysis.

The customer journey starts with the download of the *Bank of Things* application and account registration, including the setup of IoT devices such as household appliances, utility meters and smart vehicles. The devices send their status and usage data to the platform that predicts upcoming transactions based on the real-time status of the devices (e.g. empty fridge, refilled car, defective appliance). It then initiates the payment by sending “transaction proposals” based on registered consumption habits. It suggests a service provider, e-commerce supplier, brand, etc. Recurring transactions, e.g. reordering detergent, are transformed into customer subscriptions and loyalty plans. Furthermore, a capital budgeting approach can be adopted, through which clients receive personal advice for budget managing and are offered personalized consumer credits. *Bank of Things* can serve as foundation for ancillary services such as *Lifestyle-based Credit Score* and *Robo-advisory*. The required resources and processes are customer service employees, data mining and IT administration, partnership acquisition, authentication and privacy protection, and transaction management.

Bank of Things targets a customer who experiences the need to reveal, automatize and speed up invisible transactions, and wants to have a flexible and custom payment and budget management system. Its value proposition is to automatically initiate invisible payments triggered by clients’ connected devices and understand clients’ purchase patterns to encourage custom subscription plans and positive saving behaviors. The communication strategy should evolve around the app and advertising online, as well as in the. Distribution channels for the service will be the mobile application and the IoT devices. Non-exclusive agreements with IoT device manufacturers and (online) retailers to ensure technical compatibility are essential.

The business model is estimated to yield an estimated profit margin of 59% (€40m). The predicted annual revenues amount to €68bn based on UniCredit's customers' annual expenditure for supplies and groceries of €96bn, multiplied with an expected IoT penetration rate of 14% by 2020, and a transaction fee of 0.5%. The predicted annual costs of €28m consist of €14m administrative cost and €7m each for marketing & CRM and ICT outsourcing.

2.3 Recommendations to the company

Based on the sound analysis of our explorative research we recommend UniCredit to implement three groups of business models that will anticipate future needs and ensure UniCredit's competitiveness in the retail banking market. We recommend UniCredit to commence with the detailed planning and implementation of the three business model clusters as soon as possible to respond to the speed of change in the market that is driven by the startups. An illustrative roadmap that shows the necessary high level measures to introduce the services within three years' time can be seen in Appendix 9. The proposed services can be implemented simultaneously, even though different services respond to different triggering events: *Bank with You* and *Bank at the Branch* should be implemented together, as their main driver is the information on the client. The information collected by the two services is complementary and helps understand the customer's lifestyle. *Bank at the Branch* on the other hand is triggered by the market situation that is driving to a restructuring of the branch system, which is leading to the closure of several branches. Leveraging on the pace of this existing process, strategic locations should be reshaped into *Brand Stores* and *Functional Spaces*. Lastly, it has to be stated that since trends are subject to constant change, new services and business models might arise. It is therefore important to reevaluate the offer and anticipate customer's future needs to identify additional services to be offered on a rolling basis.

2.4 Concerns and limitations

By the very nature of the task, predicting what will be relevant 10 years from now, it is obvious that there is a lot of uncertainty. Ten years ago was one year before the introduction of the iPhone that would represent a milestone and major game changer. The prediction of future needs and recommendation of services to satisfy those needs is based on the present-day information. Trends can change in magnitude and orientation, therefore UniCredit should carefully monitor early signals and reevaluate the situation accordingly.

This also holds true for UniCredit's competition. Due to the explorative character of the Business Project, no attention was paid to the competitive landscape. At the present time the competition is not relevant for the analysis of which services UniCredit should implement in the future, since it is a greenfield project for all players. In order to gain a competitive advantage, beating the competition with the execution and implementation is crucial though. This will be especially challenging when competing with smaller and more agile startups. Startups can afford to fail fast, UniCredit needs to protect its brand image and shareholder interests. UniCredit must try to avoid bureaucratic slowdown and focus on execution to be successful. Finding the right balance between exploration and exploitation will be paramount.

2.5 Individual contribution

Creative work benefits a great deal from collaboration and building on each other's ideas. Therefore, we worked most of the time together, sitting in the same room during the first phase. In the second phase division of tasks gradually set in and I was responsible for the attractiveness analysis of the services. In the last phase I was in charge of developing the business model cluster *Bank with You*, for which I conducted the necessary research, analysis and elaboration on results. Since I was the most experienced with PowerPoint, I also created the slide master and templates for the service briefs and business model presentation. During the final presentation with the company I presented the introduction and the first phase of the project.

3 Academic discussion

We have presented recommendations for innovative service offerings in the retail banking industry to remain competitive in face of a changing market environment. A challenge that companies have to face across all industries is the underlying problem of innovativeness versus short-term profitability. There are trade-offs between customer centricity and economic profits, efficiency and innovativeness and company size and agility. In the following, I will critically discuss existent research in the fields of organizational strategy and organizational behavior that contribute to these questions.

3.1 Possible links with management theories

In the early 20th century, Frederik W. Taylor published the monograph *The Principles of Scientific Management*, which should herald a new era of management, emphasizing on productivity and efficiency (Taylor 1911). The next phase of evolution in management science came along with a more holistic view and in form of the *experience curve*, a model from Bruce Henderson, founder of The Boston Consulting Group, which theorized about the impact of different drivers of competitiveness and implications for corporate strategy development (Henderson 1968). He also developed the growth-share matrix (*BCG matrix*), a well-known strategy tool for product portfolio analysis that helps to determine the allocation of resources among different products or markets (Henderson 1970). The next milestone in management science came in the 1980s with Michael Porter's work on competitiveness and strategy in his book *Competitive Advantage: Creating and Sustaining Superior Performance* where the five forces model was introduced (Porter 1985). Subsequently, core competences as key for global leadership and competitiveness (Prahalad and Hamel 1990) and the *resource-based view* were introduced, shifting the locus of performance variance origination from industry effects towards firm effects (Collis and Montgomery 1995).

Fueled by increasing competitiveness due to progressing automation and globalization, strategic planning became increasingly important and sophisticated. This emphasis on strategy formulation however led to a gap between planning and implementation. Research started addressing this problem by providing insights and recommendations on organizational change (Kotter 1996), culture and leadership as the enabling drivers for implementation (Schein 1985), and performance metrics such as the *balanced scorecard* to track its progress (Kaplan and Norton 1996). With the prevalence of the Internet unparalleled opportunities for sourcing, collaboration, service offering and customization arrived, resulting in an even more dynamic, international and open business environment. This fast-paced world requires firms to be agile and responsive while having a clear long-term orientation as guidance (Markman and Venzin 2014).

3.2 Relevant theories and empirical studies

The challenge the presented Business Project tackled for UniCredit lay within spotting trends and developing new products or services to address changed needs in order to remain competitive. In the academia, one interesting article on this topic stems from Mary J. Benner, and Michael L. Tushman. In their paper *Process Management and Technological Innovation: A Longitudinal Study of the Photography and Pain Industries*, they research the connection between efficiency and innovativeness based on the empirical data from two industries. Their hypothesis is that a crowding-out takes place, where with increasing process management activities in a firm, the number of exploitative innovations and the share of highly exploitative innovations increases, while the number of explorative innovation declines (Benner and Tushman 2002).

Process management focuses on reducing variance to increase speed and organizational efficiency through high-level coordination of activities within the company. Process management typically follows three steps: First, routines are mapped or documented (Hammer and Champy 1993). Second, those routines are improved to become more efficient, which means

increasing control over the process and reducing the variance in order to become more reliable. This usually happens through incremental changes and includes measuring efficiency gains (Powell 1995). Third, standardized best practices are implemented throughout the organization to ensure continued efficiency improvements (Hackman and Wageman 1995). For their study, Benner and Tushman used the ISO 9000 quality program certification in companies as independent variable for process management activity.

With the application of process management to new product development processes the authors suggest that organizations will innovate more rapidly as they incrementally improve the innovation processes, but at the cost of variance reduction. There are two different search modes for innovation: exploitation and exploration. Exploitation is based on existing resources and capabilities with the goal of improving existing components or architectures and can therefore be described as *local* search. Exploration on the other hand is detached from existing knowledge and involves distant search for new capabilities. For their study, Benner and Tushman analyzed whether a newly filed patent cited one or more previously filed patents or no prior patents of the focal organization. In the first case they considered it an exploitative innovation, in the latter they regarded it as an explorative one.

They tested their hypotheses with two large-sample, longitudinal studies of firms in the photography and paint industries over the period 1980 to 1999. In the photography industry the data showed a positive and significant correlation between ISO 9000 activity and exploitative innovations, even after adjusting for firm size, health, R&D efforts, and natural increases in exploitation over time. The more an innovation was based on prior knowledge, i.e. existing patents, the stronger was the effect up to beyond 90% of knowledge sharing. At the same time, there is a significant and negative effect between ISO 9000 certifications and exploratory innovations that is becoming increasingly significant, the more exploratory an innovation is. Lastly, the regression model shows that the share of exploitative innovation increases with increasing

process management activity. The coefficient becomes more significant the more exploitative the innovation is, even after adjusting for fixed effects. In the photography industry the results are similar regarding the significant correlations between process management activity and the two forms of innovation, even though the effects are not as strong as in the paint industry. Thus, the initial hypothesis of a crowding-out effect that goes beyond age or size can be accepted for both samples.

This can be a problem, because there is the presumption that increased routinization and coordination in an organization's activities may increase responsiveness in stable environments, but may also contribute to resistance to change, competency traps, and inadequate or inappropriate responses in changing environments due to a lack of capability to undertake radical, variation-creating forms of innovation (Leonard-Barton 1992; Abernathy and Utterback 1978). A focus on process management activities may lead to increased short-term effectiveness, but also cause inertia and inadequate environmental responsiveness. The authors therefore recommend managers to handle process management activities with care and be aware of unintended or undesired outcomes, e.g. by protecting variation-creation innovations from process management activities. They suggest to build organizational architectures and develop cognitive models that allow to pursue both exploitation and exploration simultaneously.

This is an idea that Tushman further elaborates on in his papers *The Ambidextrous Organization* and *The Ambidextrous CEO* (O'Reilly III and Tushman 2004; Tushman, Smith, and Binns 2011). In the first paper the shared characteristics of companies that manage to simultaneously exploit the present by pursuing incremental innovations, and explore the future for discontinuous innovations are discussed. Namely, the ability to separate the exploratory units from the traditional exploitative ones, while maintaining tight links across units at the senior executive level. Breakthrough projects that were launched in the ambidextrous way, i.e. structured in an independent unit, could be linked with superior performance compared to other

detected project structures (functional design, cross-functional teams or unsupported teams). Based on case examples, three requirements are stated to become an ambidextrous organization: First, the company needs to have an ambidextrous senior teams and managers. Second, the senior team must be committed to operating ambidextrously even if its members aren't ambidextrous themselves. Third, the company needs to have a clear and compelling vision that is relentlessly communicated by its senior team in order to build an ambidextrous design. In the second paper, these three requirements are complemented by three leadership principles that help a company become more ambidextrous. First, developing an overarching identity, which goes in line with the need for a clear vision. Second, holding tension at the top, either through a hub-and-spoke team or ring teams. And third, embracing inconsistency, i.e. treat innovation units different than core business units different in terms of resource allocation, performance measurement and decision making. This way, exploitation and exploration can both be pursued within the company, granting solid short-term returns while being responsive for environmental shifts.

3.3 Implications for theory and future research

The presented innovation models showcase the difficulty established firms have with explorative innovation, as it is the case for UniCredit. When FinTechs entered the market and started disrupting the industry, traditional retail banks were still competing through efficiency and variance reduction. Benner and Tushman show that process management activity influences the level of explorative innovations in a company independently of size and age of the company. The digital revolution opened up unparalleled opportunities for companies to enter markets and scale business models. Fixed cost to start a business became negligible and customer acquisition is possible at a fraction of the cost it used to be thanks to extremely targeted advertising and social media. Since the data that was used in the analysis was collected between

1980 and 1999, it is safe to assume that it did not include startups in a modern sense. Opportunities for future research therefore lie in analyzing the effect those changed dynamics have on innovativeness in general and whether the theory of ambidexterity holds also true for startups.

4 Personal reflection

After the initial kick-off meeting with the client, our project team sat together to discuss the input we received and expectations UniCredit had articulated. It really helped that we all were genuinely interested in the project. This way, even when we talked about it during our free-time it didn't feel as a burden. All of us had applied for this Business Project with highest priority and were lucky to have been assigned to it, hence everyone was very motivated and eager to demonstrate full commitment. However, it quickly became evident that since we had never worked together, we would have to undergo Tuckman's stages of group development, the phases of forming–storming–norming–performing that are inevitable in order to become a high-performing team (Tuckman 1965). Since we came from different backgrounds and with different experiences, all of us had their own idea of how to approach the Business Project and outline the strategy for the upcoming months. This led to a situation where everybody was pitching his own ideas without recognizing the suggestions of the other team members. I noticed this problem and addressed it. We agreed to constrain ourselves to only one person talking at the same time and stick with one suggestion as long until everybody has either agreed or disagreed with it in a well-founded way, before jumping to the next idea. I believe that my experience with group works helped me to moderate those situations and ensure that we were all aligned, working towards the same goal.

Since we spent much time together, it was very important that the team atmosphere was good. We frequently went together for lunch, dinner or after-work drinks and had a very casual and collegial atmosphere overall. There was no assigned leader, but everybody pro-actively selected the tasks he felt most comfortable with, depending on his skills and time constraints.

Because we were a relatively big group of six people, we could afford to balance the workload if single members were absent for a couple of days due to university or job obligations. This worked really well for the biggest part of the Business Project.

Towards the end, when everybody was busy with exams we were not able to maintain the high morale and commitment, though. In this phase, one other student and myself tried to lead the group, which did not work out as well as we had hoped. Instead of continuing the productive collaborative approach we had maintained until then, we ended up with no other choice than a command hierarchy, where we would organize the tasks and assign responsibilities and the others would deliver their results. This allowed us to get everything done in time, but was missing the enjoyment we had felt before. In hindsight, I believe that part of the reason for this was our changed working style. Instead of sitting in the same room and working together with short ways of communication, we had switched to a remote system with inefficient WhatsApp messages and Facebook communication. As a learning for future projects I will take from this that communication is key for success and something you must not compromise, even in times of high pressure and low availability.

We evaluated the overall satisfaction with the Business Project with a 360-degree feedback process that revealed the very high levels of satisfaction of all involved parties in the Business Project, both in terms of the collaboration process as well as the final result. Key success factor for the good result of the work was in my opinion the close interaction with both the academic advisor and the corporate partner. We had interim presentations after each of the three phases and inter-sessional meetings in-between. This allowed to regularly align the direction of our work with the expectations of UniCredit and Prof. Capizzi. They gave very helpful feedback and input that we gladly integrated into our work. Especially rewarding for us was that even though they were familiar with our process and work, they were positively surprised every time by the quality of our results.

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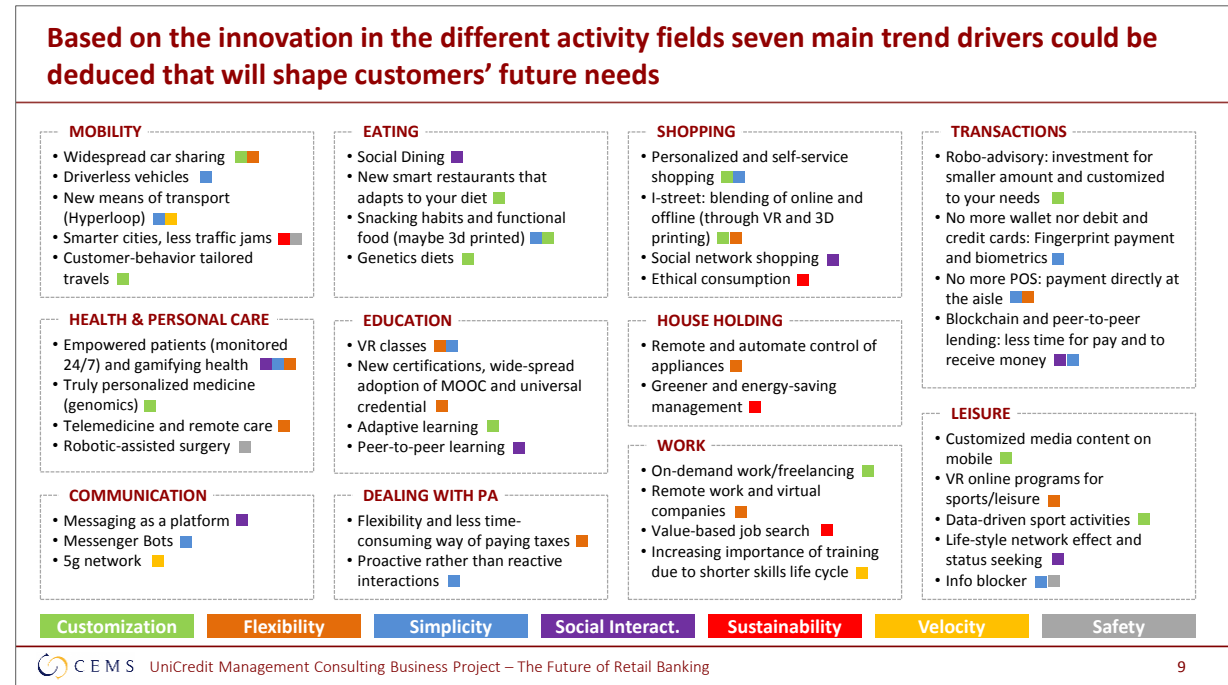
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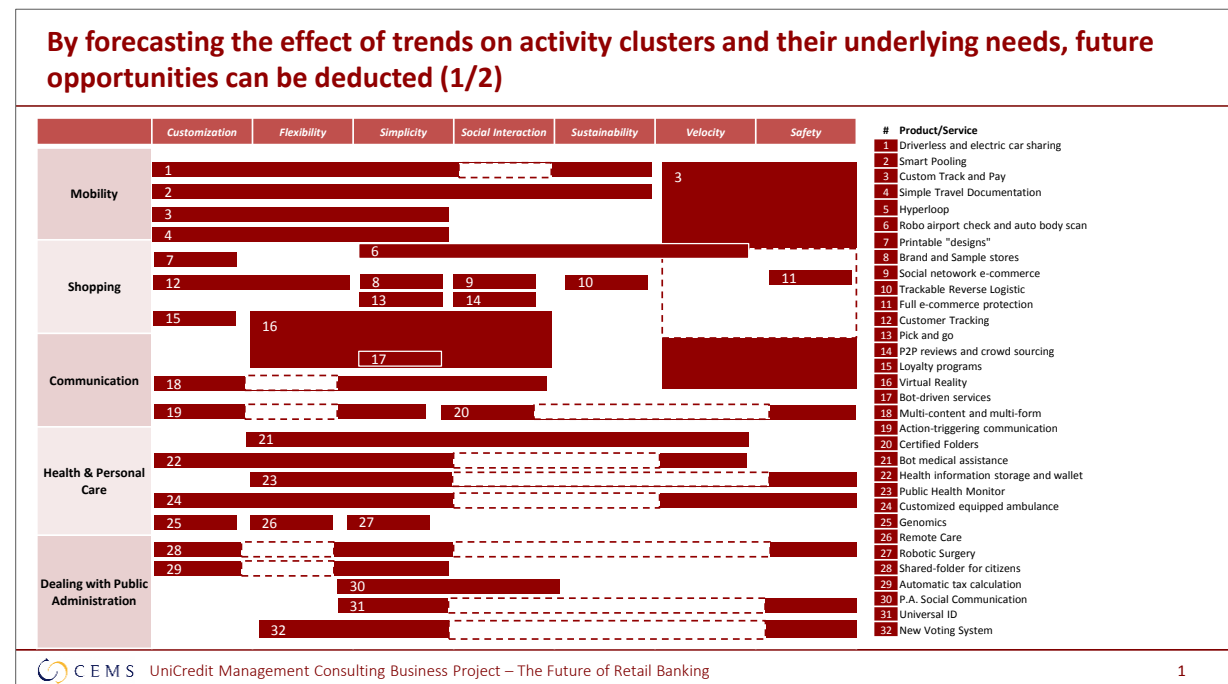
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Appendix

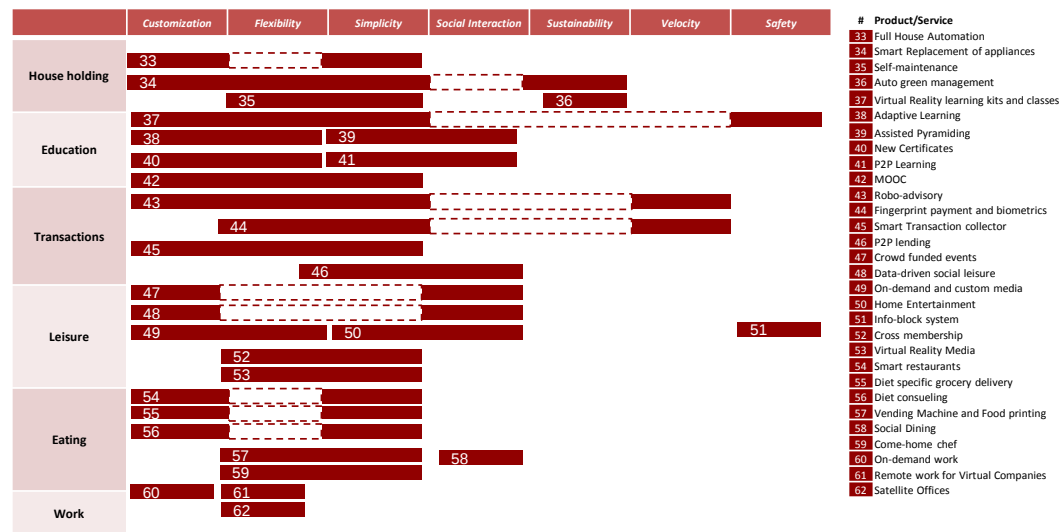
Appendix 1 – Innovation and trend drivers



Appendix 2 – General future products and services

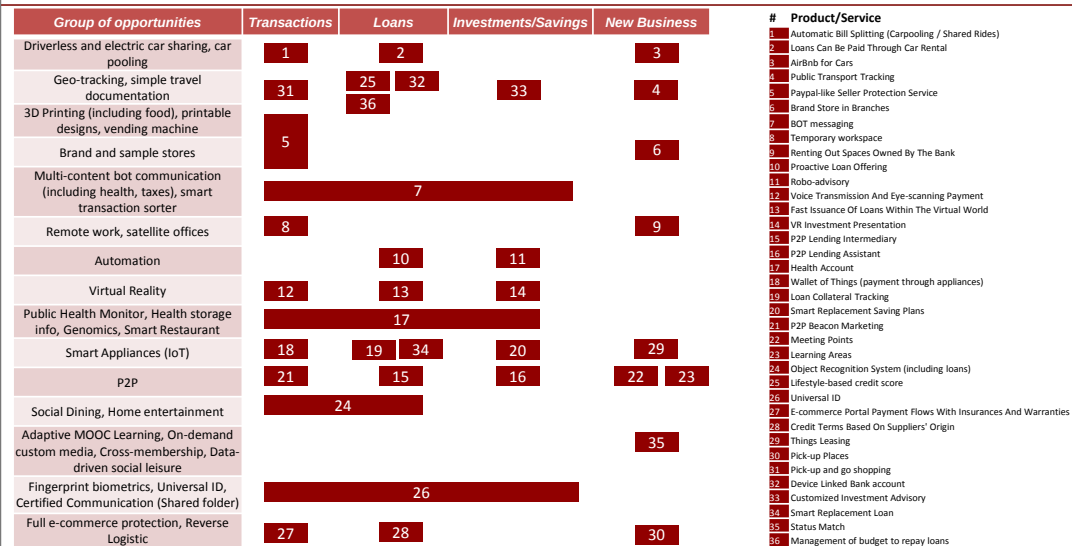


By forecasting the effect of trends on activity clusters and their underlying needs, future opportunities can be deducted (2/2)



Appendix 3 – Opportunities for the bank

From the opportunities we collected, future services that the bank can offer both within and outside its current scope can be anticipated

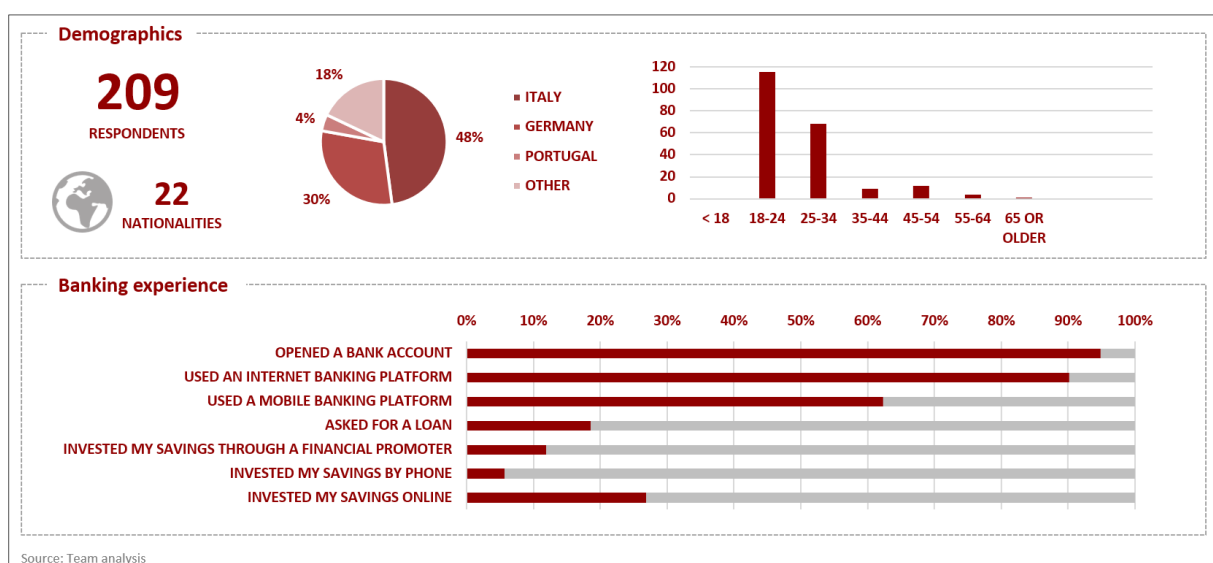


Appendix 4 – List of future services

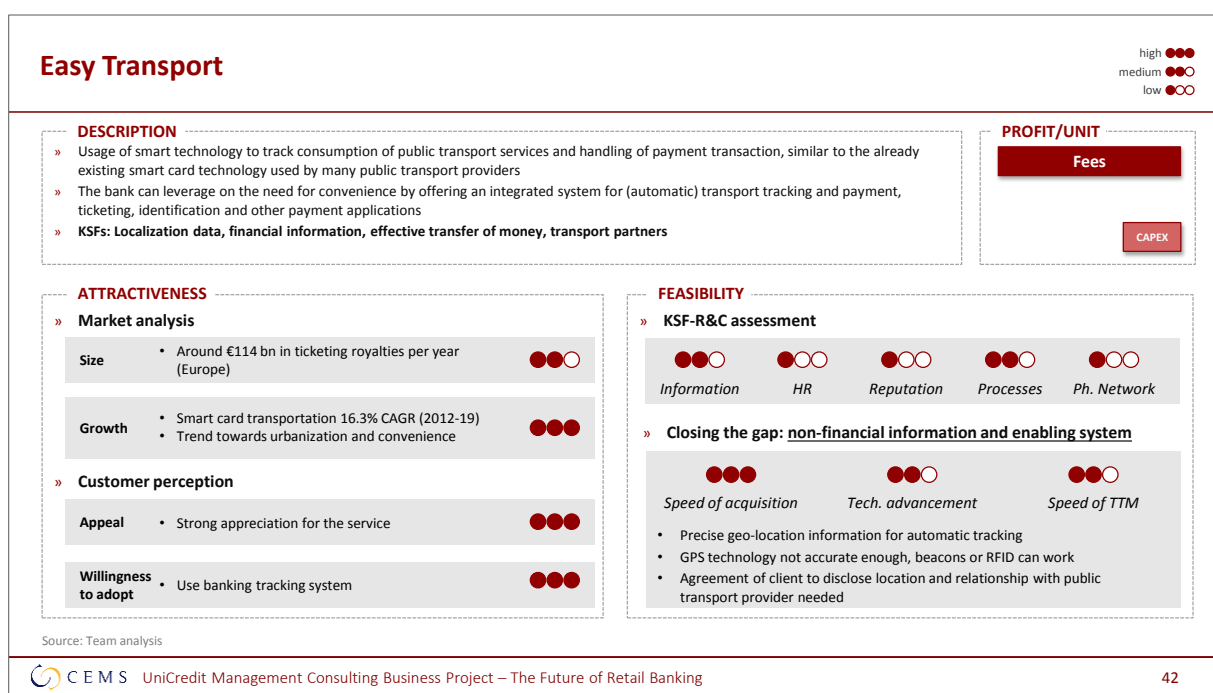
#	Product/service	Description
1	<i>Automatic Bill Splitting (car-pooling/shared rides)</i>	When using a car sharing or carpooling service together with other people, the bill is split automatically
2	<i>Loans Can Be Paid Through Car Rental</i>	If you buy a car and participate in car sharing (see #3), the loan can automatically be paid back (partly) through the revenues originating from renting out the car
3	<i>Airbnb for Cars</i>	Make use of your car when you don't use it! The bank offers insurance and facilitates transactions if you share your own car with other people
4	<i>Public Transport Tracking</i>	Instead of buying tickets for public transport, your consumption is automatically tracked and you are charged accordingly. This makes public transport more convenient and fair (because of the fair price, everyone pays)
5	<i>PayPal-like Seller Protection Service</i>	Applied to 3D printing, self-design, vending machines, brand and sample stores
6	<i>Brand Stores in Branches</i>	Partner with other companies and convert the branches into brand stores
7	<i>Bot messaging</i>	New communication channel: Bot messaging & mobile banking interaction
8	<i>Temporary workspaces</i>	Platform for finding free offices; automatic payment process
9	<i>Renting Out Spaces Owned by The Bank</i>	Renting out spaces owned by the bank such as branches or empty central office spaces as offices for remote workers
10	<i>Proactive Loan Offering</i>	Proactive automatized loan offers
11	<i>Robo-advisory</i>	Algorithm based investment advisory with very low commissions
12	<i>Voice Transmission and Eye-scanning Payment</i>	Use modern forms of authentication such as voice transmission or eye-scanning to initiate payments
13	<i>Fast Issuance of Loans Within the Virtual World</i>	Fast issuance of loans within the virtual world
14	<i>VR Investment Presentation</i>	Use possibilities of Virtual Reality to visualize investment proposals and saving plans
15	<i>P2P Lending Intermediary</i>	Acting as intermediary in P2P process (like Lending Club)
16	<i>P2P Lending Assistant</i>	Matching people who want to save/invest with people with interesting projects.
17	<i>Health Account</i>	Use data from wearables and medical records to create a designated account dedicated for healthcare expenditures with an investment and saving policy tailored around the individual's medical needs
18	<i>Wallet of Things (payment through appliances)</i>	Payments through appliances: Real time rewarding by identifying offers and deals through geographical location. Disappearance of payments since devices will do the transactions in real time and those will be encompassed in other services such as replenishments of basic groceries and consumer goods
19	<i>Loan Collateral Tracking</i>	Accurate risk management and credit analysis, loan collateral tracking, smart replacement loans, device linked credit lines

#	Product/service	Description
20	<i>Smart Replacement Saving Plans</i>	Dedicated saving plans to replace appliances subject to their expected lifetime
21	<i>P2P Beacon Marketing</i>	System that notifies close peers of a customer about his particular transactions, inviting them to participate (e.g. for social events like going to a concert or booking a trip)
22	<i>Meeting Points</i>	Use branches as meeting points, where people can meet and talk about their saving plans or retirement plans, or the best offers and instalments to get a car, the best conditions to get a mortgage etc.
23	<i>Learning Areas</i>	Use branches for financial education purposes with focus on young people
24	<i>Object Recognition System (including loans)</i>	Possibility to save, order and pay for products, when they are being advertised on the TV, computer etc.
25	<i>Lifestyle-based Credit Score</i>	Consumer habit based lending: use all available information (Big Data) to create more accurate credit scores, explicitly including an individual's lifestyle
26	<i>Universal ID</i>	Act as a trusted agent for offering a universal identity that stores all personal information and can be used by the individual to identify himself online and offline; potential to add a secure communication channel and digital document safe
27	<i>E-commerce Portal Payment Flows with Insurances and Warranties</i>	portal for certain e-commerce providers whose supply chain is certified (guarantee for the provenience) plus PayPal protection (manage product and payment flows with insurances and warranties)
28	<i>Credit Terms Based On Suppliers' Origin</i>	An interest rate is applied based also on the quality of the good to be bought
29	<i>Things Leasing</i>	A subscription based model for tech gadgets and other products
30	<i>Pick-up Places</i>	Use branches as places to pick up deliveries or documents
31	<i>Pick-up and go shopping</i>	Customer is recognized when entering the store, takes the products he likes and leaves without a dedicated payment process; payment is done automatically through tracking technology
32	<i>Device Linked Bank account</i>	Combine Internet of Things with bank accounts / credit lines for devices
33	<i>Customized Investment Advisory</i>	Advisory services tailored around information from lifestyle tracking
34	<i>Smart Replacement Loan</i>	Loan for appliances are paid back through energy efficiency savings
35	<i>Status Match</i>	Facilitate the matching of statuses among different loyalty programs (i.e. vouch for a customer's status)
36	<i>Management of budget to re-pay loans</i>	Guidelines for consumption based on forecasts of future expenditures

Appendix 5 – Survey statistics



Appendix 6 – Exemplary future service brief



Appendix 7 – Scoring model

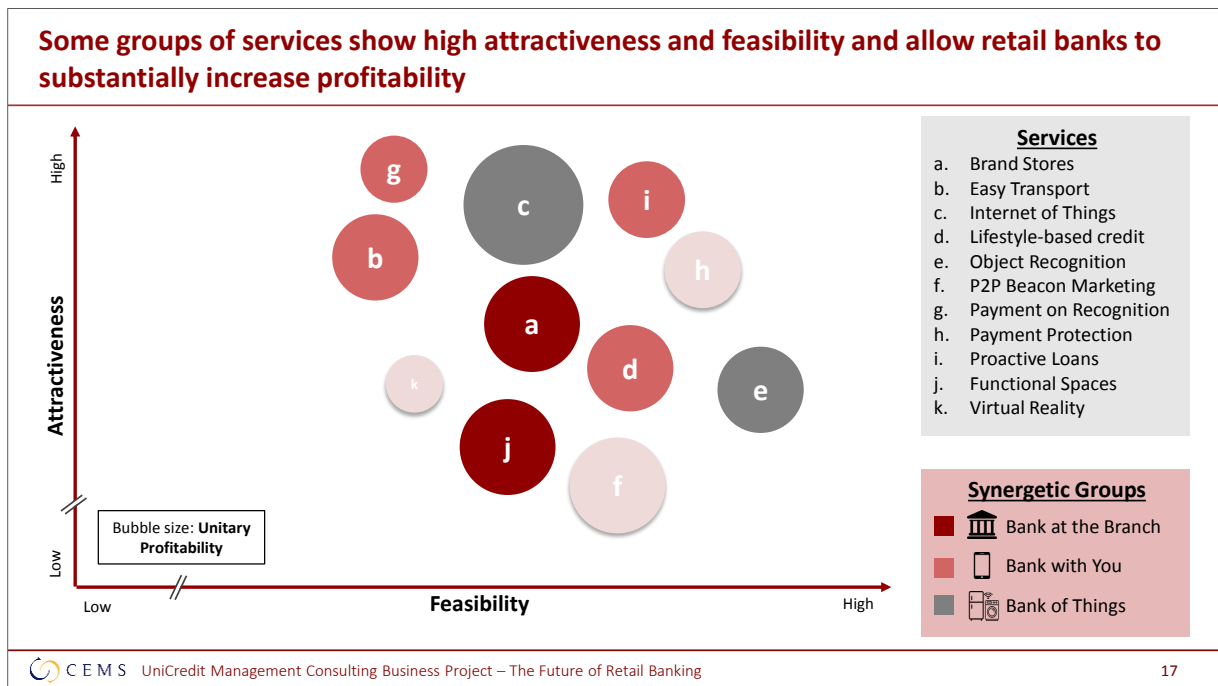
FINAL SCORING					
Rank	Group of services	Attractiveness	Feasibility	Profitability	Total Score
		[25%]	[35%]	[40%]	
1	Internet of Things	2.63	1.90	2.50	2.32
2	Brand Stores	1.88	2.07	1.75	1.89
3	P2P Beacon	1.40	2.40	1.75	1.89
4	Functional Spaces	1.53	2.13	1.75	1.83
5	Object Recogniton	1.53	2.43	1.25	1.73
6	Payment Protection	2.48	2.27	0.75	1.71
7	Proactive loan offerings	2.75	2.07	0.75	1.71
8	Lifestyle-based credit scoring	1.75	2.10	1.25	1.67
9	Easy Transport	2.53	1.53	1.25	1.67
10	Payment on Recognition	3.00	1.67	0.50	1.53
11	Virtual Reality	2.40	1.88	0.25	1.36

ATTRACTIVENESS							
Group of services	Market Analysis		Customer perception (survey)				Total attractiveness
	Market size [35%]	Market Growth [40%]	Appeal (1-5)	Appeal norm. (1-3)	WTA %	Tot customer perception [25%]	
<i>Internet of Things</i>	3	3	2.88	1.73	50%	1.50	2.63
<i>Brand Stores</i>	2	2	2.67	1.60	-	1.50	1.88
<i>P2P Beacon</i>	1	2	2.11	1.27	50%	1.00	1.40
<i>Functional Spaces</i>	1	2	2.62	1.57	54%	1.50	1.53
<i>Object Recogniton</i>	1	2	2.78	1.67	52%	1.50	1.53
<i>Payment Protection</i>	3	2	3.94	2.36	62%	2.50	2.48
<i>Proactive loan offerings</i>	3	3	2.92	1.75	86%	2.00	2.75
<i>Lifestyle-based credit scoring</i>	2	2	2.87	1.72	39%	1.00	1.75
<i>Easy Transport</i>	2	3	3.28	1.97	84%	2.50	2.53
<i>Payment on Recognition</i>	3	3	3.78	2.27	79%	3.00	3.00
<i>Virtual Reality</i>	2	3	2.31	1.39	83%	2.00	2.40

FEASIBILITY											
Group of services	R&C Assessment						Closing the gap				Total Feasibility
	Infor- mation	Repu- tation	Proces- ses	HR	Ph. Net	Total R&C [50%]	Acqui- sition	Techn. Adv	TTM	Total gap [50%]	
<i>Internet of Things</i>	2	3	2	1	1	1.8	2	2	2	2.00	1.90
<i>Brand Stores</i>	1	3	1	1	3	1.8	2	3	2	2.33	2.07
<i>P2P Beacon</i>	3	3	1	1	1	1.8	3	3	3	3.00	2.40
<i>Functional Spaces</i>	1	2	1	1	3	1.6	3	3	2	2.67	2.13
<i>Object Recogniton</i>	3	3	3	1	1	2.2	2	3	3	2.67	2.43
<i>Payment Protection</i>	3	3	3	1	1	2.2	2	3	2	2.33	2.27
<i>Proactive loan offerings</i>	3	2	2	1	1	1.8	3	3	1	2.33	2.07
<i>Lifestyle-based credit scoring</i>	3	2	3	2	1	2.2	2	2	2	2.00	2.10
<i>Easy Transport</i>	2	1	2	1	1	1.4	2	2	1	1.67	1.53
<i>Payment on Recognition</i>	3	3	2	1	1	2	2	1	1	1.33	1.67
<i>Virtual Reality</i>	2	2	2	1	1	1.6	2	2.5	2	2.17	1.88

UNITARY PROFITABILITY							
Groups of services	Revenue/Unit			Total revenue	Cost/Unit		Total Profitability
	Fee-based	Interest margin	relationship		rel. OPEX	CAPEX	
Internet of Things	3		1	3		0.5	2.5
Brand Stores	3			2.25		0.5	1.75
P2P Beacon	3			2.25		0.5	1.75
Functional Spaces	3			2.25		0.5	1.75
Object Recogniton	3	2		2.25		1	1.25
Payment Protection	3			2.25	1	0.5	0.75
Proactive loan offerings		2	1	2.25	1	0.5	0.75
Lifestyle-based credit scoring		2	1	2.25		1	1.25
Easy Transport	3			2.25		1	1.25
Payment on Recognition	3		1	3	1	1.5	0.5
Virtual Reality	3			2.25	1	1	0.25

Appendix 8 – Attractiveness-feasibility matrix



Appendix 9 – Implementation road map

