

# Appendix

Towards more meaningful and superior digital experiences in luxury automotive

Master Thesis by Kyria Calamita

FEB 2024

# APPENDIX SETUP

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# A. Project Brief

DESIGN  
FOR OUR  
future

## IDE Master Graduation

Project team, Procedural checks and personal Project brief

This document contains the agreements made between student and supervisory team about the student's IDE Master Graduation Project. This document can also include the involvement of an external organisation, however, it does not cover any legal employment relationship that the student and the client (might) agree upon. Next to that, this document facilitates the required procedural checks. In this document:

- The student defines the team, what he/she is going to do/deliver and how that will come about.
- SSC E&SA (Shared Service Center, Education & Student Affairs) reports on the student's registration and study progress.
- IDE's Board of Examiners confirms if the student is allowed to start the Graduation Project.

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### STUDENT DATA & MASTER PROGRAMME

Save this form according the format "IDE Master Graduation Project Brief\_familyname\_firstname\_studentnumber\_dd-mm-yyyy". Complete all blue parts of the form and include the approved Project Brief in your Graduation Report as Appendix 1 !

family name	<u>Calamita</u>	5414	Your master programme (only select the options that apply to you):
initials	_____	given name	<u>Kyria</u>
student number	<u>5053633</u>	IDE master(s):	<input type="radio"/> IPD <input type="radio"/> Dfl <input checked="" type="radio"/> SPD
street & no.	_____	2 <sup>nd</sup> non-IDE master:	_____
zipcode & city	_____	individual programme:	- - - (give date of approval)
country	_____	honours programme:	<input type="radio"/> Honours Programme Master
phone	_____	specialisation / annotation:	<input type="radio"/> Medisign
email	_____		<input type="radio"/> Tech. in Sustainable Design
			<input type="radio"/> Entrepreneurship

### SUPERVISORY TEAM \*\*

Fill in the required data for the supervisory team members. Please check the instructions on the right !

** chair	<u>Fernando Secomandi</u>	dept. / section:	<u>DOS</u>
** mentor	<u>Sijia Bakker-Wu</u>	dept. / section:	<u>DOS</u>
2 <sup>nd</sup> mentor	<u>Niya Stoimenova</u>		
	organisation: -		
	city: -	country: -	

comments (optional) The assignment is not hosted by an external organization, but Niya will support this project on the technology side, as she has knowledge on the its context and designing with innovations.

Chair should request the IDE Board of Examiners for approval of a non-IDE mentor, including a motivation letter and c.v.

! Second mentor only applies in case the assignment is hosted by an external organisation.

! Ensure a heterogeneous team. In case you wish to include two team members from the same section, please explain why.

### Procedural Checks - IDE Master Graduation

#### APPROVAL PROJECT BRIEF

To be filled in by the chair of the supervisory team.

chair Fernando Secomandi date 08 - 12 - 2021 signature ndi

Fernando Del Caro Secomandi  
Digitally signed by Fernando Del Caro Secomandi  
Date: 2021.12.08 10:27:41 +01'00'

#### CHECK STUDY PROGRESS

To be filled in by the SSC E&SA (Shared Service Center, Education & Student Affairs), after approval of the project brief by the Chair. The study progress will be checked for a 2nd time just before the green light meeting.

Master electives no. of EC accumulated in total: 30 EC

Of which, taking the conditional requirements into account, can be part of the exam programme 30 EC

List of electives obtained before the third semester without approval of the BoE

YES all 1<sup>st</sup> year master courses passed

NO missing 1<sup>st</sup> year master courses are:

name J. J. de Bruin date 16 - 12 - 2021 signature SPA

J. J. de Bruin, SPA  
Digitally signed by J. J. de Bruin, SPA  
Date: 2021.12.16 11:48:17 +01'00'

#### FORMAL APPROVAL GRADUATION PROJECT

To be filled in by the Board of Examiners of IDE TU Delft. Please check the supervisory team and study the parts of the brief marked \*\*. Next, please assess, (dis)approve and sign this Project Brief, by using the criteria below.

- Does the project fit within the (MSc)-programme of the student (taking into account, if described, the activities done next to the obligatory MSc specific courses)?
- Is the level of the project challenging enough for a MSc IDE graduating student?
- Is the project expected to be doable within 100 working days/20 weeks ?
- Does the composition of the supervisory team comply with the regulations and fit the assignment ?

Content:  APPROVED  NOT APPROVED

Procedure:  APPROVED  NOT APPROVED

remarks:  
- no abbreviation in title  
- a 2nd mentor from TU Delft is not allowed, she can act as an advisor

comments

name Monique von Morgen date 04 - 01 - 2022 signature \_\_\_\_\_

# A. Project Brief

The exploitation of NFTs for the evolution of luxury items in the digital \_\_\_\_\_ project title

Please state the title of your graduation project (above) and the start date and end date (below). Keep the title compact and simple. Do not use abbreviations. The remainder of this document allows you to define and clarify your graduation project.

start date 03 - 12 - 2021 \_\_\_\_\_ 17 - 06 - 2022 \_\_\_\_\_ end date

## INTRODUCTION \*\*

Please describe, the context of your project, and address the main stakeholders (interests) within this context in a concise yet complete manner. Who are involved, what do they value and how do they currently operate within the given context? What are the main opportunities and limitations you are currently aware of (cultural- and social norms, resources (time, money,...), technology, ...).

Nowadays, our society is getting more and more digital, with its horizons expanding widely. With the digital acceleration given by Covid-19 (i.e., leisure time dedicated to more digital-related activities), signals of the Metaverse\* have emerged. Facebook, for one, has stated that over the next five years or so they will effectively transition from being seen as primarily a social media company to being a Metaverse company.

The meaning of 'digital' and especially of 'digital-related leisure time' can space from different aspects, from spending time on social media to watching Netflix to playing Fortnite or Roblox.

Within our society, the 'generation filter' can help narrow it down: for example, taking into account the younger generations (Gen-Z onwards), which are more familiar with the digital environment. For them, digital leisure time often implies video games and being involved in social communities (from social networks to the ones embedded in digital collective games). In the latter, avatars allow users to express themselves in almost any kind of way and embrace one's uniqueness, through many customizations. These can be recognized as being key aspects for the younger generations.

Such characteristic of uniqueness is true for a lot of goods that exist, but it is especially very much tied to luxury goods: pieces that are scarce and not accessible to everybody, which make the person owning them truly unique.

For the digital sphere, it has been almost impossible for virtual items to be scarce or unique within the vast digital environment, if not only in the specific case of games (in which the user is not really the owner of the asset and cannot use the digital item outside of the game).

But NFTs (non-fungible tokens) have changed the way digital assets can function, exist and allow people to own a unique virtual good. As mentioned before, these aspects enable to contribute conveying premium and luxury characteristics to the digital items, so this leads to the involvement of key actors within this new context: luxury brands and the users themselves.

In this situation, brands have the opportunity to deliver digital luxury assets and, through these, to build a digital community, gain engagement and, last but not least, use this opportunity to strategically position themselves in the digital ecosystem.

The NFTs and the vision of the Metaverse are something relatively recent and new, therefore there is not much experience to see effectively how they will evolve and if they are here to really stay for the long run. For the same reason, regulations and guidelines about them are not clearly defined yet. Therefore, the main limitations in this context are regulations and, of course, the future changes, which are quite hard to predict.

\*The successor to mobile internet: "An expansive network of persistent, real-time rendered 3D worlds and simulations that support continuity of identity, objects, history, payments, and entitlements, and can be experienced synchronously by an effectively unlimited number of users, each with an individual sense of

space available for images / figures on next page

introduction (continued): space for images

### TO PLACE YOUR IMAGE IN THIS AREA:

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- CLICK AREA TO PLACE IMAGE / FIGURE

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image / figure 1: \_\_\_\_\_

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- IMAGE WILL SCALE TO FIT AUTOMATICALLY
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# A. Project Brief

## PROBLEM DEFINITION \*\*

Limit and define the scope and solution space of your project to one that is manageable within one Master Graduation Project of 30 EC (= 20 full time weeks or 100 working days) and clearly indicate what issue(s) should be addressed in this project.

It's the 21st century and, just by looking at today, almost every interaction takes place through digital devices. A digitalization that has even intensified due to the health crisis of the past years. Looking further, to what could possibly be an even more digital future, how can luxury brands maintain and convey their sense of excellence?

When thinking of these types of brands, associations to exclusivity, uniqueness and inaccessibility are most likely to come to mind. Plus, luxury is almost all of the time linked to quality, craftsmanship and heritage. All of these aspects could be considered incompatible with the digital world and its generation. How can the feeling of a superior fabric, of an elegant timepiece on your wrist or the sense of switching on the engine of a roaring supercar, evolve in the digital world?

In this context, luxury brands should not only pay attention to the digitalization as in providing an ecommerce and a very good digital customer service. Indeed, instead of only making use of ordinary and almost outdated technological adoptions, they should try to look forward and find active ways to integrate smoothly in the future (as it would be expected from such brands).

They need to create and deliver a product (or, more generally, an experience) that has the possibility of having luxury attributes in the digital context, also helping them establish a connection with the digital audience.

NFTs have a lot of potential in fulfilling this need, but they are such a newly-emerged topic that not many know or fully understand their meaning and usage. This can be especially true when it comes to the luxury manufacturing brands, which don't usually deal with (entirely) digital products.

## ASSIGNMENT \*\*

State in 2 or 3 sentences what you are going to research, design, create and / or generate, that will solve (part of) the issue(s) pointed out in "problem definition". Then illustrate this assignment by indicating what kind of solution you expect and / or aim to deliver, for instance: a product, a product-service combination, a strategy illustrated through product or product-service combination ideas, ... . In case of a Specialisation and/or Annotation, make sure the assignment reflects this/these.

I will research the context of this project (metaverse, NFTs, users) in order to design a toolkit for NFTs understanding and adoption.

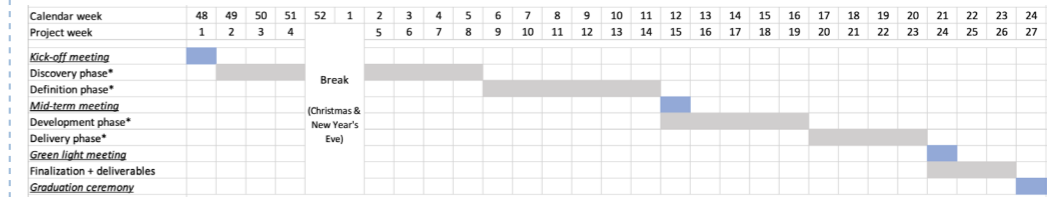
This toolkit will help luxury companies to understand the new concept of NFTs in relation to the digital world, its (luxury) application and what's needed to be considered for the adoption of NFTs. It will also give awareness on how NFTs are used and it will at the same time explain the value they have for their users (mostly the younger generations). This will be done in order to make the person who is using the toolkit empathize with them.

This is an important factor as, often times, among the Board members of today's companies, there are members from the baby-boomers/X generation. Therefore, especially true for this topic, there would be the generational gap which can make it hard to understand the value of buying and selling a digital asset (NFT) and, therefore, there could be the risk for luxury companies of entering the NFT market only for the profit. This would be a failure and a missed strategic opportunity for the long-term: the younger generation is very sensitive about companies being genuine and doing things with true intention.

## PLANNING AND APPROACH \*\*

Include a Gantt Chart (replace the example below - more examples can be found in Manual 2) that shows the different phases of your project, deliverables you have in mind, meetings, and how you plan to spend your time. Please note that all activities should fit within the given net time of 30 EC = 20 full time weeks or 100 working days, and your planning should include a kick-off meeting, mid-term meeting, green light meeting and graduation ceremony. Illustrate your Gantt Chart by, for instance, explaining your approach, and please indicate periods of part-time activities and/or periods of not spending time on your graduation project, if any, for instance because of holidays or parallel activities.

start date 3 - 12 - 2021 1 - 6 - 2022 end date



\*\*The overall project will follow the framework of the double diamond method.

For this project, a lot of focus will be put on the first part: research. Research is crucial to explore and understand all the elements involved in identifying how luxury items can evolve in the digital ecosystem, by making use of NFTs. For the discovery phase, research will be done on the context: desk research and expert interviews will be done on the current "physical" luxury sector, on the metaverse and on the NFTs. These insights will be studied and analyzed in order to come up with a hypothesis of what users value in NFTs, in relation to their use. A quantitative questionnaire will then be developed, in order to test the hypothesis and gather information on the digital users. The questionnaire will also be used to collect a smaller amount of qualitative data: I will leave room for some open-ended questions. By doing this, I will be able to gain extra insights into the users' values and opinions. The questionnaire's target will be the younger generations, which spend the most time and money on digital assets: Gen Y (1981 - 1996) and Gen Z (1997-2012). It will be important to have a significant number of respondents (possibly >50) and as diverse as possible (aged 15-35 and from top digital markets: United States, Hong Kong, Sweden, Denmark, Singapore, Switzerland, Netherlands, China, Europe). I will gain insights into the frequency with which certain perceptions and opinions occur, as well as the level of interest. In the definition phase, I will elaborate and give order to the gathered data through quantitative analysis, in order to turn the data into insights. The insights will be used to identify the main applications and values of NFTs among younger users, along with how they are used within the digital world. In this stage I will determine the most interesting personas as well as identify the key characteristics and features of luxury NFTs. The resulting outcome of the research phase will be the definition of the design brief, in order to identify the right problem to solve and later design the outcome right. For the next phase, the design phase, I will use the research's insights as guidelines for the creation of the toolkit. In the development stage, I will start to develop concepts based on the identified guidelines. This will also be the phase to have creative sessions for idea generation with experts in the luxury industry. For the final delivery I will select and detail the most suited toolkit design according to the brief and test it with experts from the luxury industry. The aim of the toolkit will be of giving easy insight and understanding on NFTs, as well as knowledge of what is needed to adopt them. Call-to-action triggers will hopefully stimulate NFTs concept ideation in the company's team, that will then be able to adapt the specific NFT(s) to the brand (identity).

I will dedicate to the project part-time, as I am working with a company that will allow me to dedicate time to my thesis. This is why the timeline is longer than 20 weeks: I will dedicate 30hrs/week, for a total of 800hrs in 26,6 weeks.

# A. Project Brief

## MOTIVATION AND PERSONAL AMBITIONS

Explain why you set up this project, what competences you want to prove and learn. For example: acquired competences from your MSc programme, the elective semester, extra-curricular activities (etc.) and point out the competences you have yet developed. Optionally, describe which personal learning ambitions you explicitly want to address in this project, on top of the learning objectives of the Graduation Project, such as: in depth knowledge a on specific subject, broadening your competences or experimenting with a specific tool and/or methodology, ... . Stick to no more than five ambitions.

The reason why I am looking forward to this project is because I am curious about exploring better the digital sector and how it evolves. This will definitely be an opportunity to gain in-depth knowledge on the subject and acquire skills in innovation management.

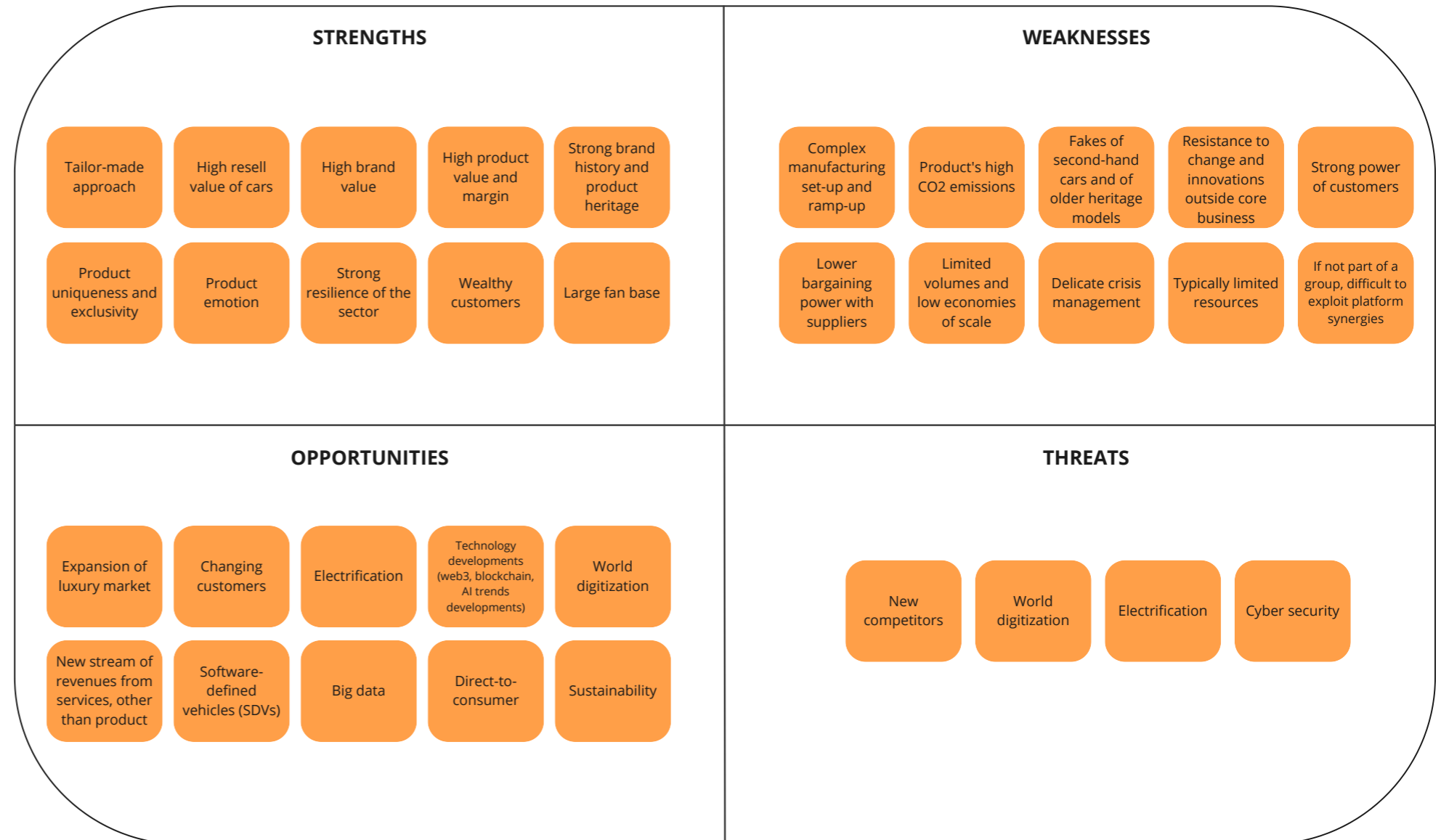
As a strategic designer, during the Master I had the opportunity to dive deep in the peculiar competences of strategic designers, such as exploring, reframing and better 'defining' fuzzy areas, and I believe that, in order to improve and acquire more expertise, experience is key. That's why this project can allow me to gain more practice in those aspects, as its context is quite new and emerging.

## FINAL COMMENTS

In case your project brief needs final comments, please add any information you think is relevant.

## B. Luxury Automotive SWOT

A full SWOT analysis is done by gathering external factors through desk research, while the internal factors were enriched with information from my professional knowledge (2+ years of experience in the luxury automotive sector).



## C. Current Customer Journey Map

Given that very scarce information was available from desk research, the journey map has been enriched with information from my professional knowledge (2+ years of experience in the luxury automotive sector). The highlighted yellow parts correspond to the opportunity areas for NFTs and the Metaverse to bring added value to luxury OEMs, which are identified in the report.

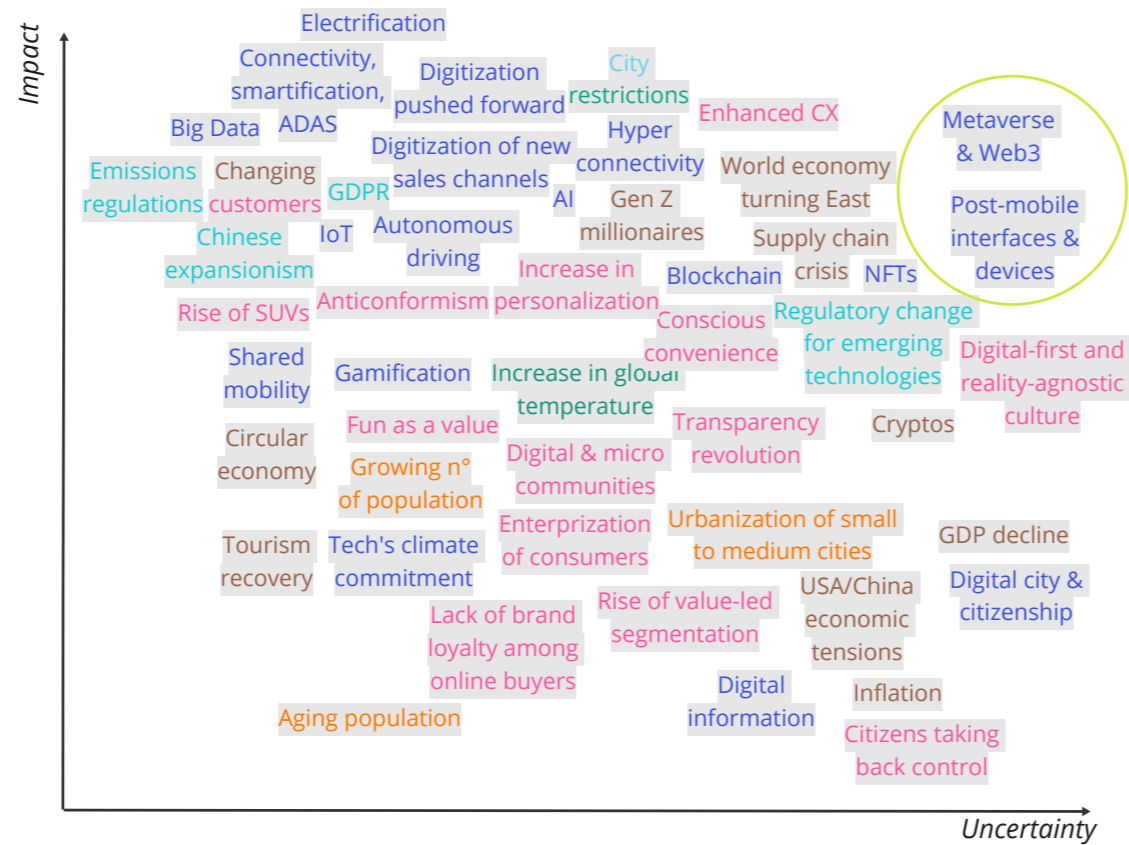
Source: RccDB Cars, 2020

CURRENT JOURNEY MAP					
STAGES	AWARENESS & CONSIDERATION	ACQUISITION	DELIVERY & USE	LOYALTY & ADVOCACY	CAR SELLING or BUYING
KEY ACTIONS	Considering the purchase of a luxury car	Purchase made, waiting for delivery (12-24 months)	Using the car	Relationship with the brand	Selling the car and/or Buy a new car
STEPS	Hear from friends See online or offline Ad Read specialised Magazine Watch video content Compare and evaluate alternatives and brand experiences Book test drive	Contact dealership or customer service to place an order Meeting or contact with brand experts for vehicle specification Waiting for the delivery	Pick up vehicle Potential contact with dealership for maintenance, servicing, issues or other after-sales service	Engage with the brand Share experience	Place new orders from brands or from second-hand market OR Sell car as second-hand
TOUCHPOINTS	Events, Autoshow, Website, Social Media, Word of mouth, Traditional media, Dealership	Online Platform, Phone, Dealership, App	Website, App, Email, Dealership, Phone	Social Media, Word of mouth, Website, App, Events, Phone, Dealership	Website, Dealership, App, Online marketplaces
EMOTIONAL JOURNEYS	😊 😊	😄 😞	😄 😊	😊	😞
STAKEHOLDERS	Clients, Friends and Peers, Influencers and Celebrities, Media Outlets, OEM, Dealerships, Fans, Communities of Enthusiasts (online and offline)	OEM, Dealerships, Client, Data management teams, Production and manufacturing teams, Transportation and logistics provider, Customer support teams, Service and maintenance teams	Customer, OEM, Dealership, Technology partners, Service centers	OEM, Customers, Dealership	Customer, Vehicle buyer, OEM, Dealerships, Vehicle Appraisal Services, Third-Party Marketplaces
JOB TO BE DONE	I want to: - Become aware of luxury car options - Gather information and explore options - Compare and evaluate alternatives - Experience the brand and car firsthand - Gain insight into the brand's heritage, craftsmanship, and production processes and share with my friends - Book an in-person test drive to get a hands-on experience and evaluate how the car suits my preferences	I want to: - Configure the ideal vehicle - <b>Have a personalized and tailored experience</b> - Connect with brand experts to discuss vehicle specifications, receive personalized recommendations, and clarify any questions I may have - Track the order process - <b>Engage with the brand during the waiting period between order placement and delivery</b> - Receive updates - Schedule delivery - Understand warranty and service - Finalize documentation - Experience a smooth transition	I want to: - Pick-up my new car or have it delivered to me and inspect it - Have fun with my new car - Be recognized and looked at on the street with my car - Familiarize myself with my vehicle's features and capabilities, such as advanced infotainment systems, safety technology, and driving assistance features - Schedule and carry out regular maintenance and servicing - <b>If I encounter any issues or help/guidance I may need with my vehicle, I want to have them addressed promptly and professionally</b> - Monitor my vehicle's health and performance - Personalize my vehicle further by adding accessories or making post-purchase customizations, such as aftermarket upgrades	I want to: - Be involved and participate in brand events and exclusive activities - Get in contact with other owners and enthusiasts - <b>Have a personalized and tailored experience</b> - Feel valued and appreciated by the brand - Share my positive experiences with friends, family and social networks - Provide feedback and suggestions to the brand - Stay informed and know in advance the brand's latest innovations, products, and services	I want to: - As a seller: Understand my vehicle's value - As a seller: <b>Have a good return on investment</b> - As a buyer: Have financial clarity (clear info about pricing, financing options,...) - As a buyer: Be confident in the brand's reputation and vehicle quality



# D. Creative Trend Research

First, to have a general overview, creative trend research on DESTEP trends was done (from desk research). The DESTEP groups external factors into six categories: demographic, economic, social, technological, environmental, and political.



- DEMOGRAPHIC:**
- Growing number of population
  - Urbanization of small to medium cities
  - Aging population

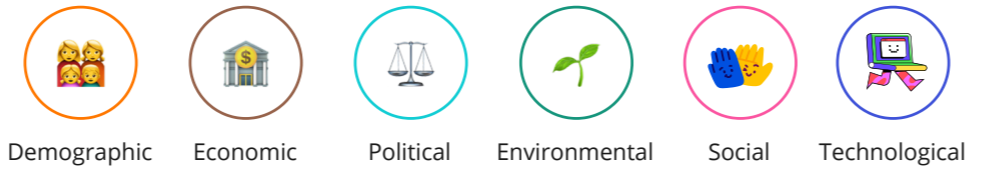
- ECONOMIC:**
- World economy turning East
  - Growing circular economy
  - Growing inflation rate
  - Tourism recovery
  - Spread of cryptos
  - USA/China economic tensions
  - Changing customers
  - Gen Z millionaires
  - Supply chain crisis
  - GDP decline

- POLITICAL:**
- Growing emissions regulations
  - Growing GDPR importance and adoption/awareness
  - Chinese expansionism
  - Regulatory change for emerging technologies

- ENVIRONMENTAL:**
- Increase in global temperature
  - City restrictions

- SOCIAL:**
- Lack of brand loyalty among online buyers
  - Rise of digital and micro communities
  - Anti-conformism
  - Growing conscious spending
  - Citizens taking back control
  - Rise of value-led segmentation
  - Enterprization of consumers
  - Transparency revolution
  - Fun as a value
  - Digital-first and reality-agnostic culture
  - Increase in personalization
  - Rise of SUVs
  - Enhances customer experience

- TECHNOLOGICAL:**
- Increase of hyper connectivity
  - Gamification increase
  - Research and development of post-mobile interfaces and devices
  - Growing development and implementation of big data and IoT
  - Research and development of AI
  - Development and implementation of blockchain, NFTs, metaverse



# E. Future Journey Map

The filling-in of the future journey map was done considering the products defined in the idea mapping section in the report and the jobs-to-be-done of the value proposition canvas in the report.

FUTURE STATE						
LEGEND: Current Journey Map (appendix C), Brand Digital Platform, Digital Passport, Digital Twin, Profile Token						
STAGES	AWARENESS & CONSIDERATION	ACQUISITION	DELIVERY & USE	LOYALTY & ADVOCACY	CAR SELLING or BUYING	
KEY ACTIONS	Considering the purchase of a luxury car	Purchase made, waiting for delivery (12-24 months)	Using the car	Relationship with the brand	Selling the car and/or Buy a new car	
STEPS	Hear from friends See online or offline Ad Read specialised Magazine Watch video content Compare and evaluate alternatives and brand experiences Book test drive	Contact dealership or customer service to place an order Meeting or contact with brand experts for vehicle specification Waiting for the delivery <b>Receive digital twin and personal token</b>	Pick up vehicle <b>Receive digital passport</b> Potential contact with dealership for maintenance, servicing, issues or other after-sales service	Engage with the brand Share experience	Place new orders from brands or from second-hand market OR Sell car as second-hand	
TOUCHPOINTS	Events, Autoshow, Website, Social Media, Word of mouth, Traditional media, Dealership, <b>Brand Digital Platform</b>	Online Platform, Phone, Dealership, Brand digital platform, App, <b>Brand Digital Platform</b>	Website, App, Email, Dealership, Phone, <b>Brand Digital Platform</b>	Social Media, Word of mouth, Website, App, Events, Phone, Dealership, <b>Brand Digital Platform</b>	Website, Dealership, App, Online marketplaces, <b>Brand Digital Platform</b>	
EMOTIONAL JOURNEYS	😊 😊	😄	😊 😊	😄	😄	
STAKEHOLDERS	Clients, Friends and Peers, Influencers and Celebrities, Media Outlets, OEM, Dealerships, Fans, Communities of Enthusiasts (online and offline), <b>Technology provider, Digital content creators and developers</b>	OEM, Dealerships, Client, Data management teams, Production and manufacturing teams, Transportation and logistics provider, Customer support teams, Service and maintenance teams, <b>Technology Providers</b>	Customer, OEM, Dealership, Technology partners, Service centers, <b>Technology Provider</b>	OEM, Customers, Dealership, <b>Technology partners, Digital content creators and developers</b>	Customer, Vehicle buyer, OEM, Dealerships, Vehicle Appraisal Services, Third-Party Marketplaces	
JOB TO BE DONE	<b>I want to:</b> - Become aware of luxury car options - Gather information and explore options - Compare and evaluate alternatives - Experience and virtually explore the brand and car firsthand - Attend virtual events and product launches to stay informed about new releases and innovations. - Gain insight into the brand's heritage, craftsmanship, and production processes and share with my friends - Have a personalized experience, tailored to my interests and preferences (if existing customer who already owns a profile token) - Book an in-person test drive to get a hands-on experience and evaluate how the car suits my preferences	<b>I want to:</b> - Configure the ideal vehicle - <b>Have a personalized and tailored experience</b> - <b>Connect with brand experts to discuss vehicle specifications, receive personalized recommendations, and clarify any questions I may have</b> - <b>Place an order and feel sure and confident of the car bought (new or second-hand), knowing it represents his personality and style</b> - Track the order process - <b>Showcase and engage with my digital twin and with the brand during the waiting period between order placement and delivery</b> - <b>Trust that my data is secure and used only to enhance my luxury automotive experience</b> - <b>Access exclusive experiences, content, chats, events, or offers that are customized to me and tailored to my preferences and interests</b> - Receive updates - Schedule delivery - Understand warranty and service - Finalize documentation - Experience a smooth transition	<b>I want to:</b> - Pick-up my new car or have it delivered to me and inspect it - Have fun with my new car - Be recognized and looked at on the street with my car - Familiarize myself with my vehicle's features and capabilities, such as advanced infotainment systems, safety technology, and driving assistance features - Schedule and carry out regular maintenance and servicing - <b>If I encounter any issues or help/guidance I may need with my vehicle, I want to have them addressed promptly and professionally</b> - Monitor my vehicle's health and performance - Personalize my vehicle further by adding accessories or making post-purchase customizations, such as aftermarket upgrades - <b>Have access to immersive and easy guidance about my car</b> - <b>Have the complete, certified, and securely stored history of my vehicle, including the maintenances done and the service records, for potential resale or trade-in</b> - <b>Easily schedule and manage service appointments, viewing upcoming maintenance needs, and receiving service reminders</b> - <b>Access and share my car's digital passport data with authorized service centers to streamline maintenance and repairs</b> - <b>Showcase and use my car digitally</b> - <b>Receive personalized experiences from the brand across various touchpoints, including in-car, based on my preferences and interests</b>	<b>I want to:</b> - Be involved and participate in brand events and exclusive activities (both IRL and digitally) - <b>Get in contact with other owners and enthusiasts</b> - <b>Have a personalized and tailored experience</b> - Feel valued and appreciated by the brand - Share my positive experiences with friends, family and social networks - Provide feedback and suggestions to the brand - <b>Stay informed and know in advance the brand's latest innovations, products, and services</b> - <b>Use my digital twin to showcase my association with the luxury brand</b>	<b>I want to:</b> - As a seller: Understand my vehicle's value - <b>As a seller: Have a good return on investment</b> - As a buyer: Have financial clarity (clear info about pricing, financing options,...) - As a buyer: Be confident in the brand's reputation and vehicle quality - <b>As a buyer: Personalize my second-hand car (ODCF)</b> - As a buyer: Review and verify the complete history of the vehicle, including maintenances, service records and ownership details - As a buyer/seller: Get tailored recommendations on new and/or pre-owned cars, based on my preferences and driving habits	
ACTIONS	<b>Business</b> Implement a Robust Content Strategy Provide Localized Experiences Actively Incorporate Feedback Incentivize Profile Token Adoption	Provide Expert Consultations for Customers Provide Specific Engaging Experiences for Customers Allow Seamless Integration Across Touchpoints Build User Trust on Data Usage Collect and Enrich Data Feedback Incorporation Continuously Keep Model Updated	Allow Virtual Service Appointments Provide Interactive Troubleshooting Guides and User Manuals Feedback Incorporation Dealer and Customer Incentives Establish KPIs and Use Data Analytics Collect Information from Car Use	Offer Exclusive VIP Experiences Foster Community Engagement Provide Personalized Loyalty Programs Transparently Communicate to Customers	<b>Technical</b> Build a Robust and Scalable Platform Enhance Social Integration Establish KPIs and Use Data Analytics Implement Algorithms for Personalized Content	Ensure Cross-Platform Data Consistency Fine-Tune Personalization Algorithms Establish KPIs and Use Data Analytics Integrate with Order Confirmation
CHALLENGES	<b>Business</b> Maintaining User Engagement Managing User Expectations Evolving Market Trends and Cultural Shifts	<b>Business</b> Ensuring Customer Awareness Maintaining Personalization Accuracy Changing Customer Preferences Changes in Data Privacy Regulations	<b>Business</b> Integration in Dealer's Workflow Maintaining Accurate Data Management Legal Regulations	<b>Business</b> Ensuring Security and Privacy	<b>Technical</b> Building and Maintaining a Robust Technical Infrastructure Frustration of Users (if technical issues arise)	<b>Technical</b> Ensuring Realistic Representation Ensure Cross-Platform Interoperability
RESOURCES/PARTNERS	Technology Provider specialized in digital platform creation and management, Content Creation Partners, Data Analytics Service, Legal and Compliance consultants, Digital Platforms/Games partners, Dealerships, PR agencies	Technology Provider specialized in NFT token creation and management, 3D modeling provider, Data Analytics Service, Legal and Compliance Consultants specialized in blockchain and NFTs, CRM System provider, Luxury mobility services, Dealerships	Technology Provider specialized in NFT token creation and management, Legal and Compliance Consultants specialized in blockchain and NFTs, Dealerships, Third-party service providers	Content Creation Partners, Event management companies, Data Analytics Service, Dealerships, PR agencies	Legal and Compliance Consultants specialized in blockchain and NFTs, CRM system provider, Data Analytics Service, Dealerships	

## F. Business Model Canvas

The business model canvas was built from the journey map information: actions (for the key activities block), resources/partners (for the key resources and partners block), touchpoints (for the channels block). While, for the key propositions and customer segments block, the information generated from the value proposition canvas.



## G. Validation Sessions

An interview guide was used to guide the semi-structured interviews. Some of the interviews were not possible to do in person, based on the availability of some interviewees (2), while others were taken in person (3). The software of Microsoft Teams was used to conduct the 2 online interviews.

Prior to the interviews, the respondents received a consent form:

Consent Form Graduation Project Research

Kyria Calamita

To be filled in by the research participant

### TAKING PART IN THE STUDY

I have been able to ask questions about the study and my questions have been answered to my satisfaction.

I consent voluntarily to be a participant in this study and understand that I can refuse to answer questions and I can withdraw from the study at any time, without having to give a reason.

I understand that taking part in this study involves answering questions about my perspective and experiences and doing several exercises on an interactive platform named Miro.

I agree to the interview being video- and/or audio-recorded and in the case these fragments will be transcribed to text and all data will be anonymized during this study.

### USE OF THE INFORMATION IN THE STUDY

I understand that (personal) information I provide will be used for a report about the conducted interview study, will not be shared beyond the graduate researcher and involved supervisors and will be fully anonymized.

I agree that my information can be quoted in research outputs. I understand that these quotes will be anonymized.

I understand that information like anonymized transcripts and recordings will be stored in a secured online environment that administers safeguarded access.

### SIGNATURES

[Insert name here]

DD-MM-YYYY

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Name of Participant

Signature

Date

To be filled in by the researcher

I have accurately informed the potential participant of my study and, to the best of my ability, ensured that the participant understands what he/she is freely consenting.

Kyria Calamita

DD-MM-YYYY

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Name of Researcher

Signature

Date

## G. Validation Sessions

### INTERVIEW GUIDE:

1. Welcome & give project description
2. Introduction on the technologies of the project
3. Go through each concept individually and for each of them, after giving a description of each, ask:
  - What do you think of this concept and its value proposition? ...Why?
  - What are the expected barriers for implementing this concept? ...Why?
  - What would be the main things needed to implementing this concept? ...Why?
4. Move to the plotting on the map:
  - Now comparing the concepts, how would you plot them?
  - Why are \*these concepts\* placed here?
    - o Why are those barriers for implementing higher?
    - o Why is the potential value higher of this concept?

### 5. Show roadmap:

- What is your first impression about the roadmap? ...Why?
- What is your opinion about the time-pacing of the horizons? ...Why?
- What are your thoughts on whether this roadmap aligns with a luxury OEM strategy? ...Why?
- What do you expect that would be necessary to embed such a roadmap into your organization?
- Are you missing certain aspects in the roadmap that you are wondering about?

### 6. Wrap up:

- The interview is over, do you have any questions?

### PRODUCTS MAPPING:

An overview can be given on the perception had by each professional that was interviewed in relation to the difficulty of implementing the product (low-high) and the potential value it can bring to the business (low-high). At the end of the chapter the map with the overview for each product can be found.

### MAPS DESCRIPTIONS:

#### CUSTOMER JOURNEY

1. Digital Platform: Positioned as the product with highest potential value for the business and the one with the highest implementation barriers
2. Digital Passport: Considered to have a high potential value for the business, but lower than the digital platform, and not being relatively easy to implement
3. Digital Twin: Considered to have a high potential value for the business (same as the digital passport) and having a bit more implementation barriers than the digital passport
4. Profile Token: Positioned as the product with the easiest implementation and it presents good potential value for the business, but, if compared to all the other three products, it is the one with the lowest value for the business

#### NFT & METaverse

5. Digital Platform: Positioned as the product with a good potential value for the business and being the easiest to implement, along with the digital twin

6. Digital Passport: Positioned as the product with the highest potential value for the business but many implementation barriers
7. Digital Twin: Positioned as the product with a good potential value for the business and being the easiest to implement, along with the digital platform
8. Profile Token: Positioned as the product with a good potential value for the business, like the digital platform and digital twin, but also having many implementation barriers

#### IT ARCHITECT

9. Digital Platform: This is seen as the easiest to implement among all four products but is perceived to have the lowest potential value and benefits for the business.
10. Digital Passport: It's considered to have the highest potential value and benefits, along with the profile token, but is the most difficult to implement among the products.
11. Digital Twin: Positioned as less difficult to implement than the Digital Passport and with higher potential value and benefits than the Digital Platform.
12. Profile Token: It's considered to have the highest potential value and benefits, along with the digital passport, but is the most difficult to implement among

the products.

#### DIGITAL MARKETING

1. Digital Platform: Positioned as having a mediocre potential value for the business and being not too difficult nor too easy to implement.
2. Digital Passport: Positioned as having the highest potential value for the business, along with the digital twin, and being the easiest to implement
3. Digital Twin: Positioned as having the highest potential value for the business, along with the digital passport, and being easy to implement, almost like the ease to implement digital passport
4. Profile Token: Positioned as having the a very low potential value for the business and being a bit easier to implement than the digital platform

#### AFTER SALES

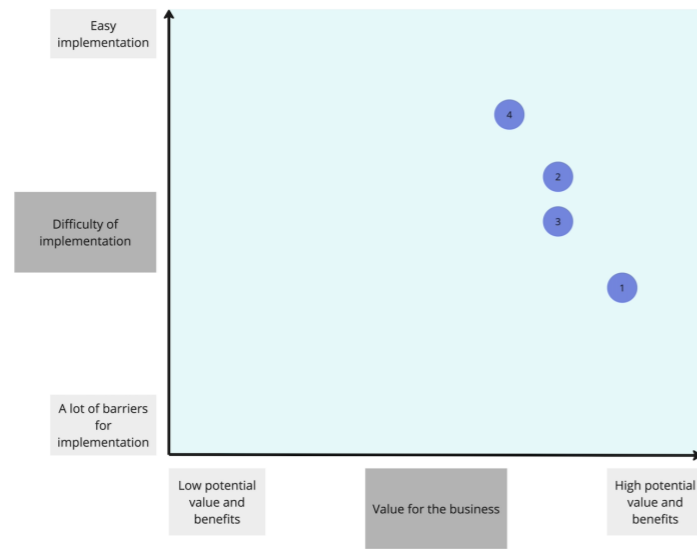
1. Digital Platform: Positioned as having a medium-low potential value for the business and being the easier to implement
2. Digital Passport: Positioned as having the highest potential value for the business and having a medium-high difficulty in implementation
3. Digital Twin: Positioned as having a medium-low potential value for the business and having a medium

difficulty in implementation

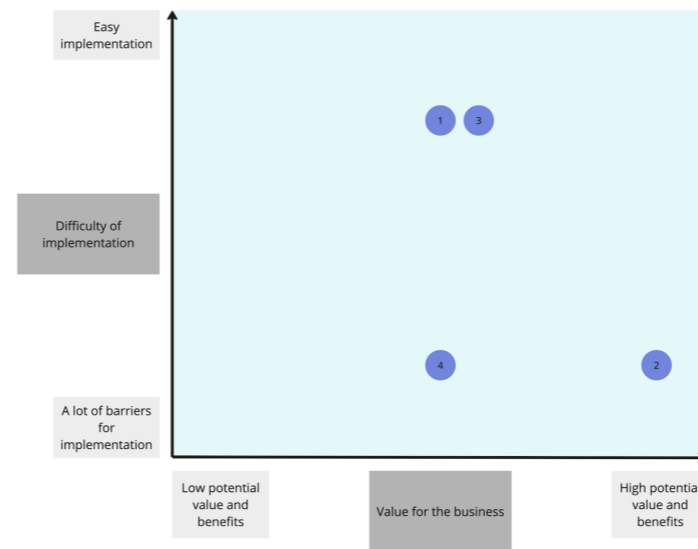
4. Profile Token: Positioned as having a high potential value for the business, a bit less than the digital passport, and having a medium difficulty in implementation

PRODUCTS NUMBERS:

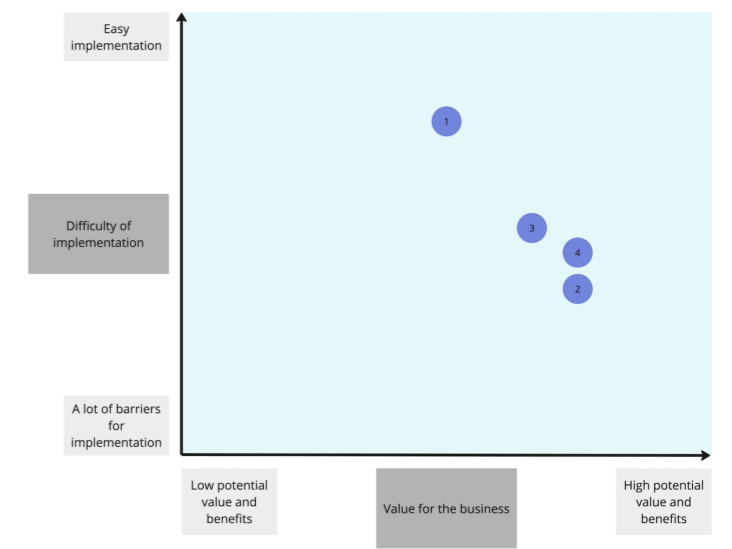
- 1: Digital Platform
- 2: Digital Passport
- 3: Digital Twin
- 4: Profile Token



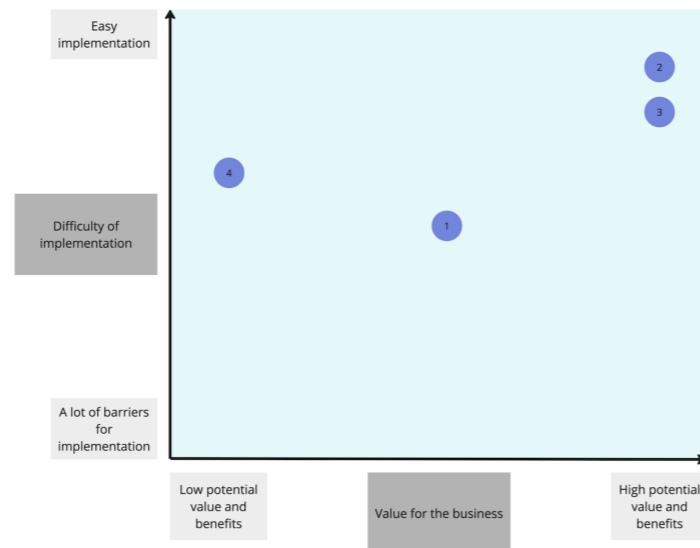
Customer Journey Manager



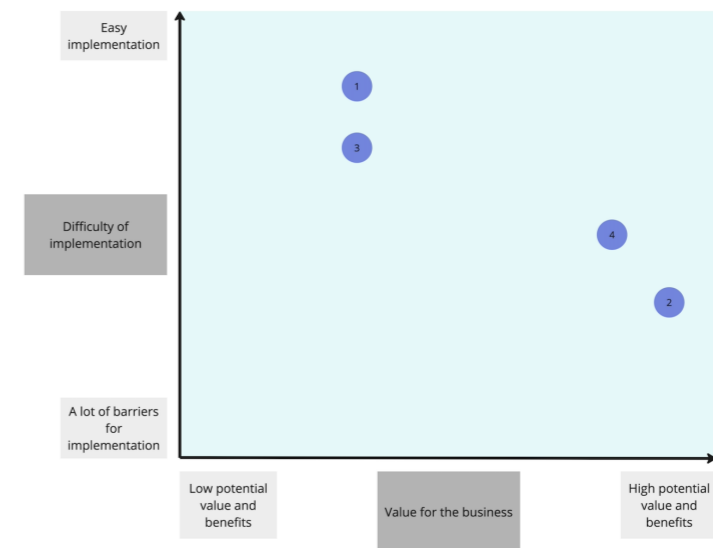
IT Application Architect



IT Application Architect



Digital Marketing Manager



After Sales & Requirements Manager