A Vehicle as a Celebration of Humanity

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First of all, I would like to thank my parents for their unconditional love and support, without which this project could have not been possible nor the whole study program. Thanks as well to Program Director Demian Horst, for giving me the opportunity to study at UID and believing that I had something relevant to contribute with. Thanks to my tutor Jonas Sandström, for helping me find the way throughout this project. To the Bespoke Design Team at Rolls-Royce in Goodwood, I am really grateful for your feedback and motivating words. I would also like to thank all of my classmates for sharing their knowledge and making me a better designer during these years, but especially to Kishen Patel, Sami Laiho, Tyler Macdonald and Karl Marteliussen, for enduring together the months of this project in Umeå, without forgetting Mr. Ben Lee who, as the following pages will show, had a great impact on the outcome of this thesis. And finally, for the intense conversations that led into the development of this idea, for her critique, support, motivation and creative spirit, and for the great adventure that we have shared during these years abroad, thanks to Marcela Pluma, my wife, to whom I dedicate this project and everything I do.
Abstract

Can a vehicle celebrate humanity?

With smart machines taking over each time more tasks, there is a risk of a future without relevant field for human action. In the 19th Century, the Arts and Crafts movement proposed a reaction against the alienation generated by industrial machines. Today, following the spirit of Arts and Crafts, this project intends to pose a reaction against the aesthetics of Artificial Intelligence by embracing human-crafted methods. Furthermore, to tell a complete story of humanizing experiences, the production and use of the vehicle are focused on human interaction; in the first case as a bespoke process and in the second as a vehicle interior that fosters human interaction. With Rolls-Royce Bespoke Design as collaborator for this thesis, the project has been branded after them, taking advantage of the company’s hand-crafted approach as a positive value with humanistic potential.

The main inspiration consisted of a reinterpretation of traditional artisan methods in order to design a vehicle with novel attributes. In contrast to the common practice of vehicle design where the generation of geometry rules the latter selection of materials and production process, for this project the early inspiration from hand-crafted methods dictated material and form, which could result in limitations during the form finding process, but which could also trigger unexpected results. At the same time, the simulation of the bespoke process with a relevant individual playing the role of the product’s user had a major influence on the final outcome.

The final result is a vehicle in which the main design focus lies on the interior, although the exterior had to be developed to some extent to provide a frame for development of the inside. The main design contribution is the proposal of structural elements with an aesthetic intention which was dictated by material properties and authenticity. As a story, the project intends to question the increasing presence of Artificial Intelligence and what could be an appropriate scenario for its usage (i.e. autonomous drive algorithms enabling human interaction inside the vehicle). So with the goal of providing humanizing experiences for makers and users of the product, even overlapping the role of makers and users during the bespoke process, the project tells a story of humanization through craftsmanship and dialogue.
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Introduction

Motivation

After ten years of first being enrolled at a design school back in Mexico, the rediscovery of my early personal interest in this discipline has been revealing. While computer aided methods and technological resources are today inseparable with design praxis, the whole experience of designing outside of the virtual realm has always been a principal motivation to start tackling a design brief. First with the feel of paper and the smell of solvent markers while sketching, later with the texture of materials and the development of technique while using tools to find a shape, the total physical experience of designing becomes not only enjoyable but also crucial to find creativity in my personal process. Two years after being accepted at the MFA Transportation Design programme of UID, hardly any memory of school work has brought me such joy as the exploration process during the third term Form Workshop course. Turned into a child again by allowing myself to play and melt objects with the pure goal of form-finding, the satisfactory creative activities of those few weeks then became overwhelmed by the sad, sterile process of parametrizing and capturing the dynamics of the experimentation through computer software. Starting with this reflection, the general preliminary goal for this thesis was to engage in a creative process that was enjoyable, and with that in mind, the idea of somehow focusing on manual work became a driving force.

Background

Although in this capitalist world there are strong tensions between corporations’ interests and actual common good, the current thesis tries to produce a design that somewhat mends these differences. Hinging from a topic that is of certain relevance to the well-being of human species, a specific component of a brand’s set of values can serve to articulate a concept that to some extent escapes the paradigm of a voracious corporation. Personal reflection upon these ideas started during a 5 month period spent in Southern England, ironically, working for Rolls-Royce Motorcars Ltd., the world’s most opulent automotive OEM. Although the company’s products are aimed at people with power and thus could be seen as a symbol of inequality, being so close to its manufacture facilities exposed a unique area of opportunity to come up with a proposal of genuine humanistic value. With components and features that are crafted by hand within the factory, responding to low production volumes and even commissioning artists for the elaboration of special pieces, the artisan touch in the creation of these vehicles constitutes a less alienated, more human and arguably more sustainable process. Maybe inspired by just living in the United Kingdom, country of origin of the Arts and Crafts Movement, the ideas of designer, artist, craftsman, poet and theorist William Morris started to gain weight in my vision of what could be the generation of genuine value for both makers and users of a vehicle. As these ideas resonated with the already mentioned personal motivation of designing as a pleasurable physical experience, the heavy influence of Arts and Crafts principles helped in the construction of a bold question to drive the project: “Can a vehicle be a celebration of humanity?”

Controversial for the obvious reasons, the question carries a deeper meaning which will hopefully be discovered in the following sections of this document, starting with a research phase dedicated to explain why craft is of importance, how an aesthetic reaction has political implications and why we should, in this moment of history, celebrate humanity.
If, as stated by Marx (2008), human work is the only source of wealth besides natural resources, we could easily think of work as the key to human essence. It is important to differentiate the term work from the term labor, as work relates to the creation of value while labor relates to the activities done in exchange for a salary (ibid.). In this sense, work is nothing more than what we do to transform the environment to our convenience and what has located us at the top of the evolutionary pyramid.

But human work does not end with the creation of mere use-values. The development of the arts and all creative activities comes as the evolution of an excess of energy employed in the manufacture of human-made tools (Zizek, 2006). In other words, even for primitive humans it was not enough to build objects with a simple utilitarian goal -as showed by dexterity needed to sculpt the symmetric shape of the handaxe in Figure 2 (Zutovski, Barkai, 2015). The aesthetic search, for which that extra work and skill have been used during thousands of years, has always been an essential part of human activity. In a classic Marxist notion, all the excess of work spent beyond the practical dimension of things is what finally constitutes us as humans, and Slavoj Zizek brilliantly summarizes it by saying that human is not simply an animal who makes tools, but one who designs them (ibid.).

Having this clear has been key to understand the role of a designer in today’s industry. The functional character of objects is what engineering is generally concerned with and it is of great importance because its failure could compromise even survival. But designers generally deal with aspects of less importance: deficient style, taste or even comfort do not put survival at risk. If we simplify, it could be said that designers deal with all the aspects that could be considered luxury as they exceed the simplest way to fulfill a need.

But as unimportant as it might appear, it is everything on the creative side of human activity that has moved societies towards mass cooperation and achievement. According to Yuval Harari (2015), luxuries like art, philosophy and storytelling over pure survival have allowed humanity to push the boundaries of wealth, and, whether we believe it or not, enjoy an unparalleled level of prosperity during the last decades.

Driven by the whole spectre of human creation to our day, motivated by the ideology of humanism and with the best intentions behind scientific and technological development, we might nevertheless be facing times of great change, and Harari invites us to question the stories that we tell to facilitate the right kind of human cooperation.(theRSA.org, 2016).
As Artificial Intelligence takes over each time more complex tasks, humans are becoming easily replaceable by more economic, more efficient machines. There is also a utopian view in which machines will liberate humans from undignifying tasks, but as seen in a debate from World Economic Forum (2014), expert opinions are divided - and rather cautious - regarding the failure or success of robots providing us the freedom to pursue a life of achievement through meaningful work. Professor David Silver (FOUNDLIGHT Productions, 2017) from Deepmind describes the achievements of project "AlphaGo Zero" as a piece of Artificial Intelligence that was not only able to beat a world champion at a complex Chinese board game, but as a complex system capable of rapidly analysing the full body of human know-how on the field and then self-learn ways to overcome deadlocks by creating whole new sets of knowledge. We are in front of the first examples of creative A.I. and while it is indeed exciting, we should be careful with the way in which they are conducted.

If algorithms already have better performance in cognitive and even creative activities, we could face a future in which there is no possible field for relevant human action. With A.I. replacing humans at potentially every task, we run the risk of becoming useless and thus powerless (Harari, 2015). Returning to the thoughts on human essence: without chances of performing meaningful work, what would be substantial about being human?

Continuing with Harari’s views on the future of humanity (theRSA.org, 2016), a scenario worth mentioning is the merging of Artificial Intelligence with the human mind. As he puts it, a new species of enhanced humans could bring the most serious kind of inequality ever. Aided by A.I. and bio-technological prosthetics, these emerging super-humans could finally represent an evolutionary separation from regular homo-sapiens, meaning that inequality would not only be the result of economic differences, but of an actual biological gap between species.

As pessimistic and far-fetched as they may sound, Harari’s visions are latent possibilities, but not prophecies (ibid.). The way he sees it - and as it was mentioned before - we are on time to tell humanity the right stories to avoid such sad outcomes, and for that reason, this project is not aiming at long-term dystopias. If the project is successful, it will tell an optimistic story of humanization in the shortest term possible in order to raise awareness on the value of human life through creative craftsmanship, all in an effort to reach a more desirable future.

It is known that technological advances and A.I. development are not going to stop, but to make sure that we have the future we want, we should be careful of making technology serve humanity. The intention is not to blindly stand against Artificial Intelligence but, within the frame that it provides, to be able to deliver experiences that enhance our humanity.
Humanizing Character

Starting with the principle of scarcity, and based on the hours of skilled work that hand-made goods take to be produced, there is a close relationship between craftsmanship and luxury (Sewell, 2014). As explained by Axel Dumas, CEO of Hermes -arguably the world’s ultimate luxury goods manufacturer- artisans are the key for the brand to keep its status and maintain business growth, even when crisis hits global economy (Seah, 2016). But what is the role of craftsmanship in the big picture?

According to Dumas, the secret behind the success of Hermes lies within the human experience that craftsmanship fosters (ibid.). By praising craftsmanship we celebrate human achievement and we let ourselves be astonished by the value created by our kind. We are inevitably drawn to reflect our own essence on the work of others, and this comprises a humanizing experience.

Classification

Just as any discipline, the world of crafts is complex and it demands further understanding. Starting with simple handmade work and going through utilitarian, traditional and creative variants, the maximum expression of craft could be found inside the cutting-edge classification as seen in the adjacent diagram (Klamer, 2012), where creative crafts meet with design and art -and what this project will have as an aim.
Under the previous classification a reasonable example of cutting-edge craft could represent a great source of inspiration for the project. The Arts and Crafts Movement fits within the cutting-edge crafts because of its creative and aesthetic drive which led into social critique. For its political and historical implications, the movement started by William Morris has been selected as an ideological guide to follow through the process. To make sense of this choice, the movement's origin and principles should be understood in depth.

The Industrial Revolution of the 19th Century brought mass produced commodities criticised by trained designers for their superficial ornamentation and poor understanding of materials (Wikipedia, n.d.) Morris took the critique to a social level, arguing that the deficient aesthetics of Victorian commodities had origin in the alienating manufacturing process that disconnected workers from the value created through labor (The School Of Life, 2015). In other words, the aesthetics of industrial objects were judged as faulty because of the little value they delivered to both makers and users, since for Morris the creation of beauty is a human need, and adding beauty to an otherwise purely utilitarian object brings pleasure and satisfaction to the maker while at the same time, the aesthetics and use-value of the product should bring pleasure and satisfaction to the user (Morris, 1889). In this sense, the movement was strongly against consumerism promoted by the industrial revolution, in which the mobilization of markets was more important than the delivery of true value.

The products created by the designers of Arts and Crafts were rich in content and skill, which resulted in longer hours spent in their manufacture. Unable to escape the laws of market, these goods could not compete against the prices of industrial commodities (Morris, 1888). Because of that disadvantage, the education of consumers became of strong interest to the movement, as it was important to show people that it was better to spend once in a product that could deliver value through time, rather than having to spend several times in products of low qualities that date, break or simply are not of enough importance to be taken care of instead of just being replaced (The School Of Life, 2015).

To effectively use the movement as an ideological reference, its ideas of main relevance have been recovered in the following key points:

Reinterpretation

- Reaction against machine aesthetics understood as both a result and source of alienation.
- Satisfaction in artisan lifestyle through craft and creative achievement.
- Enrichment of users’ lives through the delivery of authentic value.
- Education of users in humanistic ideals and against consumerism.

Arts and Crafts values applied to the project

Just as Arts and Crafts reacted in its own context, this project will be a reaction against algorithmic aesthetics by designing a vehicle that gives satisfaction to its makers while enriching users’ lives through a humanizing experience.
Material Authenticity

The automotive industry is full of fakes. As Nir Kahn exposes it (2017), from leather-textured plastic, to 1mm-thick wood surfaces, to chrome-plated polymers and even to false air vents, car companies are so concerned with appearance that no brand can be considered authentic— even Rolls-Royce, the epitome of automotive luxury uses plated plastic to simulate chromed metal.

In his article Material Authenticity: Challenging the Shiny Silver Box Approach (2017), Kahn makes us face the painful truth of kitschness in cars: while architects praise materials for their natural qualities, automotive designers fake these properties into cheap appearances; while a solid golden jewel is authentic and desirable, a gold-painted one lacks any class.

If authenticity is desirable and, in contrast to the fake approach of the car industry, a fundamental component of luxury goods, important lessons can be learned from other domains of design.

To set a vehicle example, a good starting point would be the timeless handcrafted beauty of runabouts like the Riva Aquarama, whose authenticity is expressed in a timeless, simple design driven by process, function and material. Without the need of showy surfaces, useless components or material imitations, these speedboats reach a level of sophistication and class that premium car manufacturers can only dream of.

Although a great source of inspiration for the project, pretending the resulting vehicle to be a boat on wheels would be unoriginal to the point of falling into the previously criticised automotive imitations. While interesting ideas can be recovered from the actual manufacturing process used in runabouts, a more useful reference would come from the concept of just letting materials establish a dialogue with the designer/craftsman to conceive a novel automotive architecture.
Sustainability

Although the project is not directly driven by sustainability, its storytelling could resonate with the following identified Goals for Sustainable Development set by the UN (un.org, n.d.):

- Growth, employment and decent work (Goal 8): At its starting point the project is just centred on dignifying the work of designers and artisans based on the satisfactory nature of creative and handcrafted work. However, the project’s big aim is to fight the emergence of the useless class described by Harari (theRSA.org, 2016) through the education of the brand’s consumers in humanistic ideals, while designers and artisans set an example of a meaningful life through pleasurable work. In this way, the project comprises a story in which the creative force of design can lead us into a desirable future in which humans have a relevant field for action.

- Reduce inequality (Goal 10): With efforts centred on the humanization of people-especially the most powerful ones- the intention is to avoid a dystopia in which inequality is generated by a misguided Artificial Intelligence. Remembering Harari again (ibid.), if we are on time to influence humanity through the right stories, this project will tell one in which the ultimate value created by humans comes from our last set of abilities to be possibly automated. This value has a great potential to remind us the importance of being human, and as long as we are all aware of it, we can have hope for a more equal future.

- Responsible consumption and production (Goal 12): After reviewing the principles of Arts and Crafts regarding consumption habits, we can instantly find a relationship with this goal. Being concerned with the creation of valuable experiences for both users and makers, designing under this approach can teach a lesson about responsibility in both directions. Furthermore, if we consider the impact that real authenticity could have, the automotive industry could be steered into the delivery of true value instead of using cheap tricks to persuade buyers. Embracing the principles of Arts and Crafts could educate users against consumerism, but that cannot be possible if designers do not challenge the paradigms behind production. For this reason, by telling a story about the creation of authentic human crafted value over blind profit making, the project could inspire responsible ways of manufacture and consumption.
After having worked for the selected brand at the core of its headquarters and factory, the personal experience at Rolls-Royce Motorcars Ltd. will serve as the main source of information for this section. The initial motivation behind Henry Royce’s first car was to build the best vehicle possible, arguing that those who could appreciate it would pay the fair price for it (Corless, 2004). From a statement that could remind us of William Morris (The School of Life, 2015), the Rolls-Royce brand status as a luxury auto maker started to grow. But in the present, regulated by strict safety standards and corporate testings, authenticity has been sacrificed in the name of engineering specifications. The luxury appeal, however, has been kept alive by a really strong brand symbolism which provides a good frame for reinvention, making it possible to reach new markets.

An innovation of extreme relevance for this research has been the creation of the “gallery feature” on the Phantom’s latest generation. By letting the owner showcase a piece of art in the dashboard, the car has been turned into a gallery on wheels, opening a whole platform to work with commissioned artists who can deliver the value of their craft to the most powerful people on Earth.

Using the car as a platform to deliver value is the main purpose of this thesis, and if that value is regarded as authentic art it should be capable of making the users reflect on their humanity while the creative process behind the piece is pleasurable to the artist. In this loop of meaningful experiences to both makers and users, could the resulting vehicle be considered a work of art on wheels as a whole, rather than just a feature? Following William Morris’s theory, it is possible: as long as the design is materialized in a pleasurable process which responds to the human need of aesthetic satisfaction. The otherwise called “lesser arts” or craft can be equivalent to the great arts, given their intrinsic social and human functions (Morris, 1888).

To conclude this section, the approach Rolls-Royce has taken, as the ultimate manufacturer of luxury cars, to elevate its products to a level of art on wheels is definitely the pinnacle of premium mobility if it is taken into consideration that art in its primitive nature represents everything that is not necessary for simple survival. Art is, in that sense, luxury in its purest form, as it is the opposite of utilitarian.
Bespoke

Being the most opulent vehicle manufacturer, the Rolls-Royce brand serves people in power. In a purely aesthetic game, customers enjoy to be amazed by handcrafted beauty, quality and limitless personalization. When powerful people visit Rolls-Royce, they do it as simple humans wanting to have fun and get involved in the creative process. What better moment to have some influence on them than during the creative game of bespoke design? In the end, the powerful are more likely to decide the fate of our kind, and if we show them the value that still exists in human creation, we could be having an influence on the decisions they make.

As a brand with luxury status, Rolls-Royce can even be selective with the customers it sells its products to. This invitation scheme could represent an ideal platform for the project, as a scenario in which the maker picks the user to collaborate with would not only make the latter feel exceptional, but it would empower the former and give it the importance that it deserves as the actual creative force behind the crafting of the vehicle. The conversation taking place between customers and designers -in a scenario in which the designer is essentially the master craftsman- would be of great weight in the overall human experience of this vehicle. Referencing Harari again (2015), we have evolved to create strong intimate bonds, and conversation is a crucial part of it. In this scheme in which customers and designers share the pleasure of creative exercise, makers could have an incomparable opportunity to educate users in the value of human creation, hopefully getting to a point in which reflection on all the work and hours spent in the process can make these powerful buyers think in a more sustainable, more human way.
Essential Features

As limitless as the levels of bespoke might appear, any of the customer’s requests must be framed within Rolls-Royce values and visual cues. The knowledge of these elements is fundamental to come up with a design that pushes the boundaries of the brand without resulting unfamiliar.

Luckily, the work experience at Rolls-Royce Bespoke Design has provided enough knowledge on the features that will be explained next:

a. Spirit of Ecstasy: Bonnet ornament and symbol of the brand.

b. Body Two-tone: Contrast color differentiating upper and lower body portions.

c. Coachline: Hand-painted accent color line. Final detail to the paintjob and a symbol of craftsmanship.

d. Waftline: Lower feature line. Can be emphasized just as the coachline.

e. Rear Hinged Doors: Signature opening mechanism which enables a welcoming gesture.

f. Starlight Headlining: Unique interior ambient lighting. Bespoke patterns and lighting effects can be applied.

g. Coolbox / Glasses: Symbol of luxury and social enjoyment.

h. Clock: Symbol of precision and craft. A reminder that time is the ultimate luxury.
A Humanizing Experience

As mentioned before, the focus is not to just blindly stand against technological development, but to picture a scenario in which technology serves as a platform to foster our humanity. Regarding vehicle packaging, electric and autonomous technologies have opened the possibilities for the delivery of value to car users. However, what are the solutions that we are getting from the industry? We could question the benefits of increased connectivity, on-wheel-offices and advertisement-populated-augmented-reality. Are these examples truly beneficial or simply alienating? As these alternatives respond to sharing behavioral data, increasing productivity and promoting a consumerist lifestyle, they could be considered of a rather alienating nature.

As a reaction to these trends, one of the project’s objective will be to provide an off-grid space for direct human interaction, and the package, aided by electric and autonomous drive, should facilitate conversation between the occupants. Conversation in its primitive form -for Harari expressed as gossip (2015)- creates intimacy and it is one of the initially unnecessary complex behaviors that have made humans evolve into what we currently are (Zizek, 2006).

Relying on personal experience, it could be said that a good conversation is enjoyable, and it is not even necessary to deal with snobby topics. To reference Harari once more (2015), the simple experience of talking about others in the most trivial gossip is enough to create or intensify bonds, and as the social animals that we have evolved into, this activity is a crucial need to be fulfilled. So in a world populated by moving offices, forced connectivity and virtual experiences, could luxury be about the scarce opposite? This thesis will try to inspire that by not only focusing on the delivery of human-crafted value, but also by providing a platform for users to be humans inside the car by interacting through rituals as simple as mundane conversation.

In order to achieve an authentic humanizing process during the creation and usage of the vehicle, a holistic scenario has been envisioned. The main intention is to provide a humanizing experience through different stages of the product’s lifecycle, starting with a creative process in which the dialogue between the designer and the customer can trigger progressive ideas.

**Human Interaction**

Craftsmanship would be the key humanizing factor during the manufacture of the vehicle, while the interior space should enable human interaction and conversation.
Goals

Humanizing

After reflecting on the realized investigation, the main opportunity lies in the possibility to create humanizing experiences within the frame of the research. In a simple statement, the goal is to design an inspirational vehicle that can set an example of how to deliver two-sided value to both makers and users.

The criteria to start the development phase will be closely linked to the previously described principles of Arts and Crafts, while paying special attention to the authenticity that can be achieved when materials are respected. Taking inspiration from ancient shrines and temples, where the most skilled craftsmen were employed to enhance a spiritual experience, the driving line for this project could be the creation of a temple on wheels, where the pinnacle of craft induces the user into a genuine celebration of humanity. The ritual performed by the users will be mundane conversation.

Hands-on Exploration

A search for interesting artisan methods would be the starting point for the project. After getting this inspiration and triggering ideas for potential vehicle architecture, hands-on exploration would follow to achieve the desired effect in the final design. The general idea is to take a step back, look into craftsmanship techniques from the present and past, and use them in a reinterpreted way with the aim of creating a Rolls-Royce where structure rather than ornament is influenced by material and craft, providing the user with an astonishing, unique experience in which the humanizing character comes from the value found in handcrafted work.

Method

Even if the plan is flexible, the ideal process will be comprised of the following steps in order to achieve the desired goals.

1. Research
2. Inspiration
3. Doodling
4. Packaging ideation
5. Hands-on exploration
6. Reinterpretation (Photoshop artwork)
7. Hands-on refinement (?)
8. CAD
9. Final renderings/artwork
10. Examination
11. Model Building
12. Exhibition
The Story

In year 2030, with an increased presence of smart machines outperforming humans, Rolls-Royce decides to question the role of Artificial Intelligence by exalting craftsmanship as the essence of humanity.

As defenders of human-crafted value, the makers of "the best car in the world" have already taken an important role in cultivating artisan lifestyle by housing and training some of the world’s top talents. To celebrate human achievement, the company decides to build a unique car every four years before the expected arrival of technological singularity.

For each new process, bespoke masters Rolls-Royce will select a personality as an ambassador of human-crafted value, who will get involved in the design, influencing the final outcome and engaging in a humanizing experience through authentic creative work.

Taking inspiration from the Arts & Crafts movement, the brand adopts the mission of creating genuine value for the product’s makers and users by manufacturing a car capable of transcending technology, becoming an object of heirloom to its original buyers and motivating humanity to embrace its essence.

Given the importance that such kind of persona could have for a project of this nature, the profile of a thoughtful Silicon Valley leader was selected as the main sponsor and source of input for the design. Contrary to the effect other shortlisted personas could have, convincing a tech leader of the value within human-crafted products could mean a direct impact on the development of future technologies for actual human benefit.

Since the selected character would be highly influential not only in the technological sphere, but as a daily life inspiration for people, the challenge of making this individual the ambassador of human-crafted value is worth taking.
**Bespoke Process**

<table>
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<tr>
<th>Invitation</th>
<th>First visit</th>
<th>Ideation</th>
<th>Design</th>
<th>Manufacture</th>
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<tr>
<td>Selected ambassador receives an invitation to join and support the project.</td>
<td>Ambassador gets to know details of the project and is instructed in Rolls-Royce cues, as well as technical aspects.</td>
<td>Craftsman, designers and ambassador discuss the possibilities for the design.</td>
<td>Designers and craftsmen make proposals. Input from the ambassador is considered from early stages through final refinements.</td>
<td>Craftsman materialize the design.</td>
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* Scope of the process to be simulated during thesis

**Bespoke Potential**

Anything but the listed elements could be altered

![Craftline (main structure)](image)

**Simulated Bespoke Session**

A relevant individual with Silicon Valley background was selected for an ideation workshop. Beyond engaging in a creative conversation, having a person to play the selected ambassador brought great insight on the lifestyle and desires of the character who would influence the design of the vehicle.

![Project explanation](image)

![Introduction to Rolls-Royce](image)

![Ideation](image)
Values, Personality, and Lifestyle

A moodboard was created in order to translate values and needs of the persona into visual attributes. These key images were validated during the simulated bespoke workshop, becoming the atmospheric aspiration for the design from this point.

Design Preferences
Processes Board

In order to honor the craftsmanship, the process was given more importance than the material itself. Using a material board at such early stage in the project could result in an approach already used in automotive design, where initial focus is in generation of geometries that can later be adorned with material appearances. While having a starting point in the process rather than the appearance could bring creative limitations in the form finding exercise, it could also trigger new ideas and uncommon shapes.

Boat building

Steel Forging

Gravity glass forming

Textile techniques

Carbon weaving

Interior Mood

Private / Social / Ceremonial
Early Sketch Development

Package Exploration

Selected option: Social & Symmetrical

Exterior Ideation

Simplification: Vestigial bonnet & grille

The structure formed by bonnet/grille displays an intentional empty space between the front wheels
Initial Package

1. Batteries
2. Hub Motors
3. Entry
4. Heirloom Cabin

Hands-on exploration

Following the initial project goals, a series of physical models were employed to explore the creation of atmosphere. Using the initial package to define general proportions, photographs of each variant were taken trying to emphasize the interior space. With the insight from the bespoke workshop, the last mockup was selected for further development into a finalized design. Although the models are not of an exquisite finish, engaging in the creation of physical objects was in line with the spirit of the whole thesis, while becoming one of the most pleasurable parts of the project.

Model A

Creating an atmosphere through the array and rhythm of structural elements.
Model B
Creating interior atmosphere from the composition of intertwined structural elements.

Model C
Using bent wood to create interior atmosphere and exterior geometry.
Model D

Ornamental glass roof in combined with increased density of structural elements.

Further Sketch Exploration

After the physical mockups and the simulated bespoke session, a synthesis of the findings was pursued via a second loop of sketching. Trying to define an exterior concept first was useful to have a frame upon which the interior could be based, while iterating on top of an approximate package allowed an efficient ideation process.

Exterior Theme Finding
Double vertical doors
Ornamental Structure
Integrated platform
Material decay?
Ornamental Privacy Glass
Hologram Interface
Cracked Glass?
**Seat Ideation**

Key Idea: Cantilevered, Integrated

**Interior Exploration**

Key Idea: Blending seats with walls

Selected theme
Validation

Virtual reality technology was of great help to experience the design in full scale. Starting with simple surfaces and evolving into each time more refined models, the package always remained somewhat flexible to accept changes with every loop of VR revision. Although compromises had to be made, the focus stayed on creating the atmosphere desired by the ambassador.

Updated Intention

Driven by the selected key sketches, the results from the validation process were incorporated to the design as an overview sketch before further refinement. While the design of the seats and the basic architecture reached their final iteration at this stage, other components like the clock and table still needed to be designed.
Final package

The several loops of virtual reality testing provided an effective way to spot basic scale mistakes so that better ergonomic solutions could be reached. The comparative side view on the right shows the significant variations within the cabin space from the initial package consideration to the final design. Changes were not only influenced by pure ergonomic factors, but by the intention of creating a spacious atmosphere.
Overview

Although the general architecture and main designated areas did not suffer any major changes, a lot of the styling had to be done on CAD while already modeling. Again, virtual reality made it possible to evaluate everything in full scale so to come up with final shapes relatively quickly.

Final Materials

In accordance to the ambassador's likes, a sober palette was generated from the selection of materials. Always with the principle of authenticity in mind, materials were picked based on function, hence respecting their natural properties and avoiding to make them stand for something they are not. It is important to mention that the only application of plastic comes as the reinforcement of carbon fibre.
Retractable table/coolbox

Accessible cargo area

Comfort floor mats

Welcoming deck

Oak

Wool

Woven Carbon Fibre
Involved Crafts

A forged steel coachline is the main bone of the vehicle, symbolizing the long tradition of the brand as an agent of human-crafted value. The actual body of the whole cabin is made out of wood in an approach inspired by boat building. The wooden body is visible from the interior and it is arrayed with an aesthetic radial intention.

The glass roof-bonnet is probably the most complicated element of the design to achieve due to its scale and the quantity of attempts that could be needed to reach the desired shape through gravity forming of the glass.
A hand-woven carbon fiber structure is applied as a roof lattice to provide extra strength to the top glazing while casting a shade with interesting light effects. Once again, the aesthetic intention of structural elements plays a major role in the creation of atmosphere.

Hand-stitched application of luminous thread could be enriched with function besides being an ornamental treat. Although not developed in depth, a haptic and visual interaction is proposed for the armrest, while the further seat area would perform visual feedback functions.
Ceremonial Entrance

To enhance the dramatic entrance into the vehicle, rear access and a central aisle create an experience reminiscent of walking into a shrine or temple. This effect is maximised by the roof opening mechanism that enables a grand view of all the hand-crafted elements and an immediate perception of materials working together as a composition. The lower hatch opens towards the user and then hides under the vehicle’s floor plane. This complex motion is a reminder of technical achievements characteristic in automotive design.

Interior Rituals

Respecting the initial intention and with the help of an appropriate interior layout, the overall usage goal of the vehicle is to allow a humanizing experience in the form of human interaction. This aim was addressed by designing an interior rich in quality and details but devoid of distractions for the occupants, hence creating a space that invites them to concentrate in one-another.
Functions

Seats

Velvet was selected as the main upholstery material given its soft touch and resistance to environmental factors. Hand-stitched patterns add a subtle tone-on-tone depth that enriches the interior atmosphere where applied. As already mentioned, the luminous thread employed for ornamental motifs can add an extra layer of function if used as UX / UI features.

Seats are already shaped to allow a relaxed position, but the backrest and leg support have certain freedom to follow occupants’ movements (i.e. aiding passengers while seating or standing up).
Table and Coolbox

A hand-cut glass table slides from the front to reach a comfortable position. The coolbox’s contents are revealed by following the motion of the top plane lid.

Clock / Projector

Besides being a signature Rolls-Royce element, the clock has been given a special role as a symbol of the valuable time spent with another person. Dominating the interior in its central position, the clock hosts a holographic projector as requested by the ambassador.

By using this tech feature exclusively for the creation of atmosphere and not for functional reasons like information display, technology is applied in an artistic way and could therefore transcend.
Scenario

The final visualization, besides showing adjustments on exterior proportions and details (especially trying to get a more technological feel into the platform proposal), is focused on the storytelling of the hypothetical design process. As stated before in the document, the conversation between designers, crafts people and the selected ambassador are what give a final shape to the vehicle. Therefore the car is a product of human interaction and a symbol of the achievements of human cooperation.
After going through this document yet once more and comparing the actual result of the thesis with what was originally intended during the early stages of the project, it can be said that the final outcome is simply unexpected.

Having left the United Kingdom already with what was perceived by the Rolls-Royce team as a solid brief to just start experimenting and designing, the return to Umeå added a whole extra layer of opinions and feedback that undoubtedly shaped the concept and design, but also morphed the lean seed idea into a complex mass of elements that in somehow had to work together as a concept.

In this way, from the core premise of celebrating humanity through craftsmanship, the project ended up trying to solve problems of quite different nature: from the design of ornamental motifs to the design of a business model in which an ambassador had to be invited to sponsor the creation of a vehicle.

This last idea of having an external influence from a simulated ambassador helped the final outcome take its latest shape, but not without the sacrifice of time that came from restructuring the story around the bespoke concept.

And it is precisely the schedule what suffered most after spending many hours trying to make the story and research structure work cohesively, which was probably the most difficult part of the project, as a constant negotiation between personal drive and external opinions had to be carried constantly to have progress within the academic environment.

It will always remain a mystery if standing ground with the original lean idea, and resisting the temptation of adding request after request of teachers would have led to a more focused, simple and thus elegant concept. But it is maybe the school's approach what is reinforced throughout the project and maybe even visually the negotiation (or struggle) is detectable.

Trying to at least stay true to the initial motivation of experimenting with hand-crafted methods, the physical mockups gave a special spark to the project, even if the craftsmanship was cut down to just playing with the array of structural elements – as it is clear that most of the parts that the mockups consisted of were fabricated digitally.

By the time the creative phase was reached, the project was already behind schedule. So after the mockups, what could have been an experimental hand-crafted journey had to become a regular car design project using the traditional tools of the trade to speed up the process. And while VR did play a major role in validating the design beyond the common activities of sketching and 3D modeling, it was never intended to have such an impact on the final result.

Relating the knowledge acquired from this project, and holding to the idea of the constant feedback received – even after the so-called "concept freeze" or "design freeze" checkpoints, extending to the very last minute before a presentation and also receiving recommendations after the project has been officially finalized, the overall learning of the thesis and the complete educational program can be summarized in a simple sentence: it is never enough.

Now, in a competitive field such as transportation design that statement could result obvious. But in contradiction to the basic Arts and Crafts principle of enjoyable creative labor, this burnout working ethos can become tiring and ultimately fail providing a genuine creative environment.

However, trying to end on a positive note, the tensions described are what certainly shaped the project all along the way. And if instead of talking about negotiation or struggle, the word cooperation is emphasized, the very process as a design exercise is just a sample of what, in some sense, this thesis tried to honor: the collective accomplishment of a group of humans who try to achieve the best possible outcome.
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Appendices