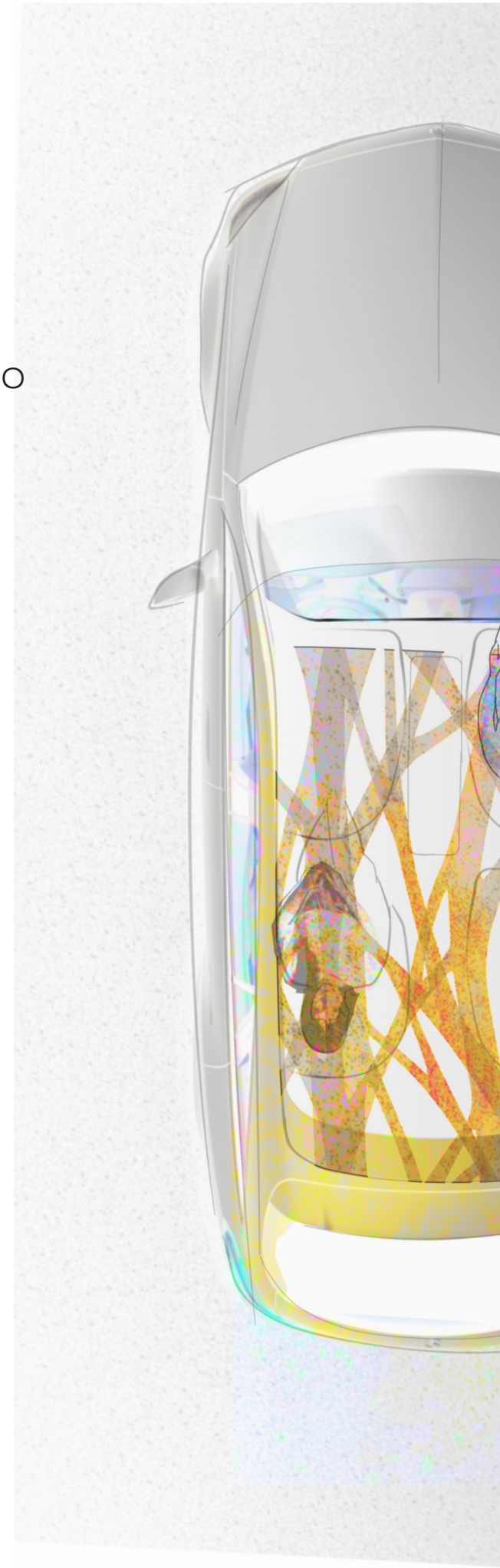
Ikigai: A reason for being
A Holistic Vision of Mercedes-Benz 2030

Master Thesis
Jasna Zoricic
June 2020



'Tradition resides within the hearts of the people who cherish it.
If it's left untold, it will disappear.'

- Sanagochi village pamphlet

Ikigai: A reason for Being

A Holistic Vision of Mercedes–Benz 2030

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June 2020

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Acknowledgements

I would like to take this opportunity to express my gratitude and appreciation for the support throughout my final project as a graduate student.

First of all to my incredible supervisory team. To Elmer, Anna and Jan… Thank you for keeping me on track, and most importantly, thank you for always making me feel motivated after our updates. At many occasions, especially during #corona_crisis, your understanding and support made me calmer and hopeful.

Elmer, thank you for the numerous teachings you have provided me within the last year of my graduation. I always admired your strategic and constructive critique of the process, forms and overall contributions of design. 'Strategic automotive' was one of the best courses in my Masters'. Choosing you as my chair, kept my efforts high in the confidence of better results. Yet, throughout our updates, instead of critique I was greeted by your support and words of encouragement.

Anna, when first speaking with you about this thesis, you asked what I considered the most important for the process. I have said, 'being able to have good communication throughout the project.' Although perhaps not obvious, communication with supervisors was never something that came easy to me. Still, talking with you always made me feel comfortable. Thank you for keeping me on track and providing me with ease in our conversations. It meant a lot.

Jan. Domō arigatō for everything. Thank you for being my spiritual and literal guide through Mercedes-Benz, Germany and life in our philosophical discussions about the world. Without your enthusiasm, I would have never sat on a plane for 11 hours and flew to Shikoku. I would have missed so much. Thank you for taking care of me when the borders closed, and I looked for a way home. Your humour and 'Ikigai' approach to little things, building blocks of fulfilling life, kept me inspired.

A special thanks go to all people helping me throughout my field research in Japan. They made me feel like there are friends wherever you go.

To Rio, thank you for taking care of me while I was in Tokushima, for being my guide around the area, and accepting me in your home. To Linda, Terumi-san, Nakamura-san, and the beautiful community of Kamikatsu; thank you for showing me your heartful society and sharing amazing stories. Tyler, thank you for taking time from your busy schedule to guide me through Mima. I would like to express gratitude to prof. Stephens of Tokushima University, and prof. Kushi from Kyoto Institute of Technology, for providing me opportunities for rich conversations and network, essential for research.

I would also like to thank Karola, for ever-friendly and enthusiastic discussions about and beyond sustainability and novel materials.

Finally, zucker kommt zuletzt. To my family, and Goran.
One paragraph is not enough. Thank you for always being there for me, and for affording me all the conceivable support there is. Thank you for all the long calls when I was away. Thank you for providing me with the opportunity to go about my explorations around the world. And finally, thank you for waiting for me to come back. None of this would have been possible if it were not for you believing in me, and helping me along the way.

Without all your help, this would not have been possible.

Preface

All my life, I was excited about the experience of travelling and encountering novelty through the ride. Therefore, I was always excited by the vehicles enabling me with such experiences and their design. However, knowing that the product which allows the ease of travel damages the places I like to escape to, left me in a dilemma. I began wondering if there was a way to make it better. This thought followed me throughout my education and research within the development of the following project.

The Automotive industry is undergoing tremendous transformation. The electrification and autonomous driving technologies bring about the new ways we use and experience vehicles. These changes implicate the interesting developments for the field, however, they also bring about the new challenges.

Within my graduation, I explore some of the challenges and opportunities the Automotive segment might encounter in the future. For this purpose, the project included the field research of Japanese rural areas. Besides the challenges elaborated further in the report, I was driven by the admiration for Japanese design, encouraged by its completeness.

From the tradition of artistry and temples brought back to nature to decompose upon their deconstruction, to the community values of respect and perfection, completeness is part of the culture. Therefore, I believe this research posed a great learning opportunity to exit the comfort zone of familiar and learn to design with people of different needs and sensitivities.

Seeing the design as a bridge between art, society, and the environment, this project is a reconciliation of fields of automotive developments, novel materials and subjective well being.

I feel fortunate to have had the opportunity to experience and learn so much within this project, and by sharing my Vision I hope to share a small step towards my idea for a future world.

Image by Silodrome.com

Executive Summary

This Master thesis was developed for Mercedes-Benz AG.
The following report elaborates the steps taken in developing a holistic interior vision for 'Sustainable Luxury' of Mercedes-Benz.

In seek of representation for the future societal needs, and possible future challenges and opportunities in terms of holistic mobility conceptualisation, the research took place in the rural areas of Japan. Therefore, this project is aimed at 'Self-reliant people accepting innovation raised on the traditional values'.

These people are seeking the segregated life, focused on the abundant luxury of time, bonds of smaller communities, and personal fulfilment. Cherishing the community traditions, innovation is acceptable if it preserves the experiential domain of respect towards community members and the environment.

To fulfil the demand for such a context, the mission was 'to achieve a perception of an abundance of less within the experience and perception of the product while keeping the identity of the brand intact.'

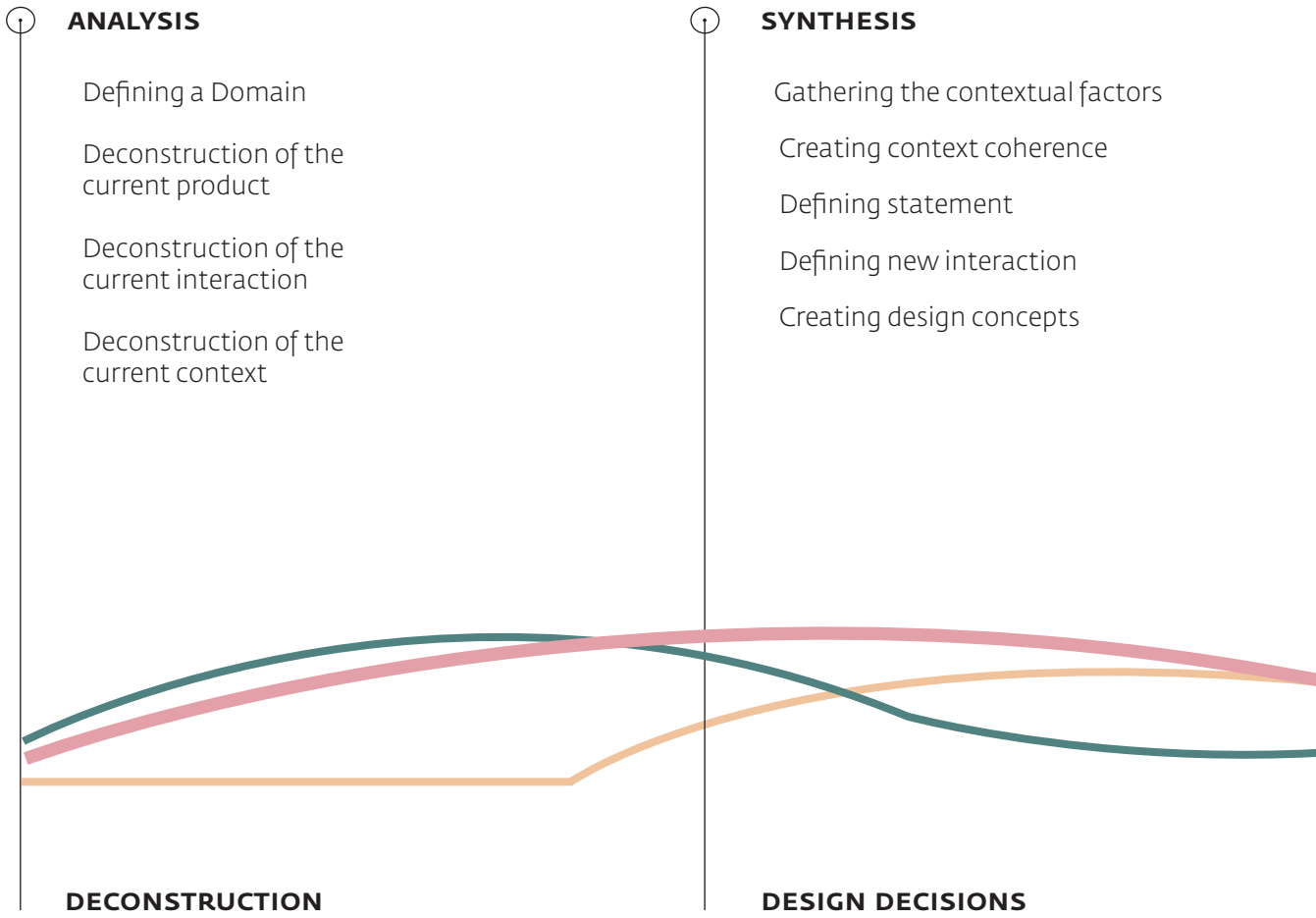
As the reconciliation between sustainability and luxury indicates the change of expression of luxury in means of a form, the qualities of the premium experience are set to keeping the utmost feeling of safety and physical ease leading to comfort. Therefore, 'encountering a moment for yourself, within a shared experience, in comfort.' was set as the desired interaction.

The ideation led to the development of three concept ideas, which were further validated and iterated leading to the conclusive vision 'Ikigai: A reason for being'.

Ikigai presents mobility solution as part of the holistic system of sustainability and manifests as a contribution to the context.

The vision 'Ikigai' is a Level 4 shared mobility service by Mercedes-Benz, intended for the rural communities of Japan. The on-demand service, utilising the Mercedes-Benz municipal vehicle, grants community residents overcoming the dependence on the pre-scheduled, public transportation of the area. The private zones in the interior space are providing users with a possibility for individual focus and relaxation while in a shared environment. Ikigai's minimalistic interior is enriched by the works of local craftsman. The material finishings of unique algae-based materials and bio-luminescent lights, produced in the village, are limited to the vehicle design specific to the area.

Consequently, the car simultaneously represents exclusivity of the local craftsmen and uniqueness of the tradition, sharing them in rides beyond the borders of the village. The brand remains to provide unique personal experiences within innovative products. Meticulous attention to details and high build quality bring it to the class of its own in providing a sense of safety and physical ease leading to Mercedes-Benz comfort.



VIP

SUSTAINABLE MATERIALS RESEARCH

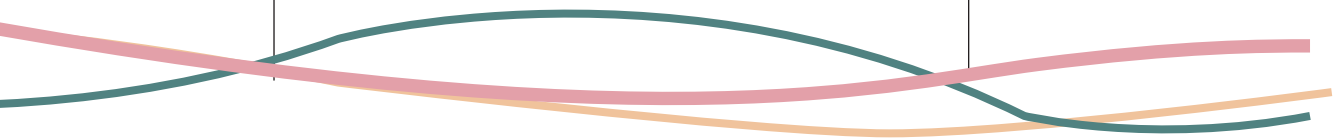
ADDITIONAL DFI METHODS

EVALUATION

Validating concept ideas

CONCLUSIVE VISION

Conclusion



Content List

Content List–Appendix

Introduction
About Mercedes-Benz

Figure 1.0, Mercedes-Benz leadership

Figure 2.0, Dedication to innovation

Mercedes-Benz AG is a german global automotive marque and one of the oldest manufacturers of cars. The name, as well as the current trademark comprising of a Daimler's three-pointed star in Benz's laurel wreath, first appeared in 1926 under the name of Daimler-Benz.

Known for development, production, and sales of premium passenger cars and services, it is part of the Daimler AG parent company. Mercedes-Benz AG is responsible for the business of Mercedes-Benz Cars and Vans, comprising product portfolio of Mercedes-Benz brand, with the subsidiaries of Mercedes-AMG, Mercedes-Maybach, Mercedes me, SMART brand and the EQ product and technology brand of electric mobility. [1-4]

'The best or nothing.'

Mercedes-Benz utilizes this mission to communicate the aim of providing the customers with the best experience of the quality, referring to the legacy of Gottlieb Daimler. By employing this statement, Mercedes-Benz wishes to embrace and communicate the brand's tradition, reminding the customers of the pioneering achievements and meticulous engineering. In this way, the brand aims to establish a strong connection with customers over longer periods. [5] The statement is also a guiding principle in terms of the brand values, experiences, and relationships to the competition. It expresses the desire to lead and continue the advantage in the market.

Figure 3.0, Perfection in build quality and comfort

Figure 4.0, Refinement based on tradition

The corresponding guiding Core Values and subsequent Experiences are;

Responsibility
Mercedes-Benz aims to take responsibility as an exemplary leader of 'Passionate Innovation', 'Holistic Sustainability' and 'Delightful Customer Care'.

Perfection
Representing the desire to be the best and signifying the focus on experiences of 'Percieveable Quality', 'Exemplary Safety', and 'Energizing Comfort'.

Fascination
To satisfy the experience of captivation and continue to astonish their customers, Mercedes-Benz focuses on the cultivated and 'Refined sportiness', 'Distinctive Style', and 'Trendsetting Design'.

Problem Definition
Sustainable Luxury

This project aims to contribute to the 'Sustainable Luxury' of Mercedes-Benz, within the novel context: one of the Japanese rural areas, as representative of the future societal needs, and with an answer to the possible future challenges and opportunities in terms of holistic mobility conceptualisation.

Viewed from the current associations to the terminology, 'sustainability' and 'luxury' are oftentimes opposing. Whereas one implies the ability to maintain constant, balanced existence, the other often implies non-essential, but highly desired wealth. Hence, a design challenge and opportunity alike lies with the reconciliation of the terms.

With the turn towards electric mobility and environmentally friendly solutions, Mercedes-Benz aims to introduce a sustainable strategy with value for all stakeholders; from customers and employees to society as a whole. [2] Therefore, genuinely sustainable design should take into account the values of environmental, economic, and societal influences equally.

Due to the technological developments and a higher quality of life, the world population is experiencing the highest rate of urbanisation and longevity ever. Although the influential urbanisation process worldwide encouraged the migration of youth and adult population towards cities, the rural areas are not empty yet. [6] The villages left behind are populated mostly by elderly residents (aged 65>) inclined to anticipate the difficulties with mobility in the upcoming years. As the population ages, people will likely suffer the inability to drive and mobility impairment. Specifically, Japanese society is strongly affected as the oldest demography in the world. [6]. Therefore, the quality of transportation adds to personal well-being. [7]

With designers in a position to intentionally contribute to the positive experiences [8-10], Mercedes-Benz could provide a holistic system of mobility, supporting the specific community needs and reconciliation of 'sustainability' and 'luxury'.

Therefore, the following thesis aims to explore and contribute to answering questions about mobility for highly developed, Japanese context of rural communities from an aspect of Mercedes-Benz contributions.

During the research phase the aspects such as;
- community values and reliance on tradition
- approach to luxury
- acceptance of the novelty and innovations
- appropriateness of innovation within the given context
- specific mobility needs,
are examined and taken into account.

The specific questions such as;
- How important is personal mobility in the everyday life of rural community members?
- How is Mercedes-Benz perceived by the rural community in Japan (i.e. Brand Image)?
- How can Mercedes-Benz specifically contribute to the life of the residents of the beforementioned areas?

are posed as the leading questions for this research.

Approach
Methods and Terminology

This project was developed by following the Vision in Product Design (VIP) approach [11]. Moreover, the thesis included the desk research of the novel, sustainable materials, as well as the field research of the Japanese context.

Vision in Product Design (VIP)

Vision in Product Design is a design approach developed by P. P. M. Hekkert and M. B. van Dijk. Its intention is the development of a purposeful 'vision' which reflects as a 'raison d'etre' of the design solution. The method is applicable for a radical, context-appropriate innovation, centred about human interaction with the design.

Sustainable materials and biodesign research

The desk research into sustainable materials and biodesign concerns with the developments of the novel biodegradable and bio-based materials and an emerging field of biodesign. The terminology of the research is applied in the chapter 'Stimulating factors for the future' and the synthesis of the concepts.

A biodegradable material is a material which may dissolve fully or partially when contacting the living organism, and the living tissue substitutes them. [12]
A bio-based material is a material deliberately made from substances derived from living, or once-living, organisms. [13]

Biodesign represents an emerging design movement which integrates the use of living material (e.g. algae, fungi, yeast, cultured tissue, etc.) to develop a product whose properties are consequently enhanced as part of standard manufacturing methods or a more complex field (e.g. synthetic biology, biomimicry, etc.) The often interdisciplinary approaches combine the interests of the fields such as life sciences (studies concerned with living organisms), bioengineering, botany, biology, art and design, to examine and contribute to the society on a sustainable level. [14]

Additional DIF methods

The additional methods concern the human-centred approach taught and practised at TU Delft's Design for Interaction (DFI) Master course. Applied during the field research of Japanese rural areas with the aim to include the user in the creative process of coming to appropriate design solutions suitable to the human desires and needs [9].

Image by Eurotuner

a: Deconstruction

Kamikatsu village

Domain

'Self-reliant people accepting innovation raised on the traditional values'

The VIP method starts with defining a specific problem area, a domain.

The domain of a project is defined by describing users within a context. Further steps of the approach focus on deconstructing and analysing the relationship of the users with product, existing within the chosen domain. [11]

The focus of the project study involved field research in Japanese rural areas. In specific, the study incorporated explorations of the Tokushima Prefecture of Shikoku island. Based on the information collected during the research, the domain of this project is defined as 'self-reliant people accepting innovation raised on the traditional values.'

Self-reliance

Abandoned by the younger generations in seek of urban lifestyles [15], the villages of countryside grew smaller, developing necessary self-reliance as a result. The residents, actively contributing to their communities, aim to provide the support for themselves and neighbouring areas' to ease the otherwise challenging lifestyles. [Appendix Method, Sanagochi Pampleth]

With the purpose of a better understanding of the lifestyles and nuances of community values, the research incorporated a field exploration of the rural villages of Shikoku island. (Detailed descriptions of the areas and research can be found in Appendix Method)

The sustainment of regional development is approached with the eagerness for better life quality and security, as resources needed to provide themselves and preserve the cherished local customs and traditions are often hard-to-reach. The residents, gathering within the local community centres, are actively participating in establishing the local leadership, forming the governance decisions, and striving for the continued revitalisation of their areas through unique, locally produced craft and design. [Appendix Method, 16]

Traditional Values and innovation acceptance

Traditional values and innovation acceptance
Shikoku (四国, literally 'four provinces') is one of the five main islands of Japan. It is famous for its 88-temple pilgrimage, consisting of Buddhist and Shinto temples. [17, 18] Although as a society, not considered very religious, Japan is traditionally influenced by many aspects of its native religion. Developed from the close relationship with nature, Shinto as polytheistic religion revolves around the kami (jap., divine beings), supernatural entities believed to inhabit all things. [19] Considering every part of nature as a representation of the divine spirits, the Shinto teaches respect towards nature and life.

The forms of respect towards nature and communities were identified in the contemporary strives of the following three areas:

- respect towards nature and life
- mutual support and perseverance

Consequently, innovation supporting the community preservation within the area is acceptable, as long as it is formed upon the traditional values of respect to nature and living environment.

Within the localities of Shikoku, the examples of self-reliant, innovation-implementing communities are recognised [16]. Due to the efforts of the local authorities (residents), the villages noted positive migrations and greater public awareness of the area-specific qualities.

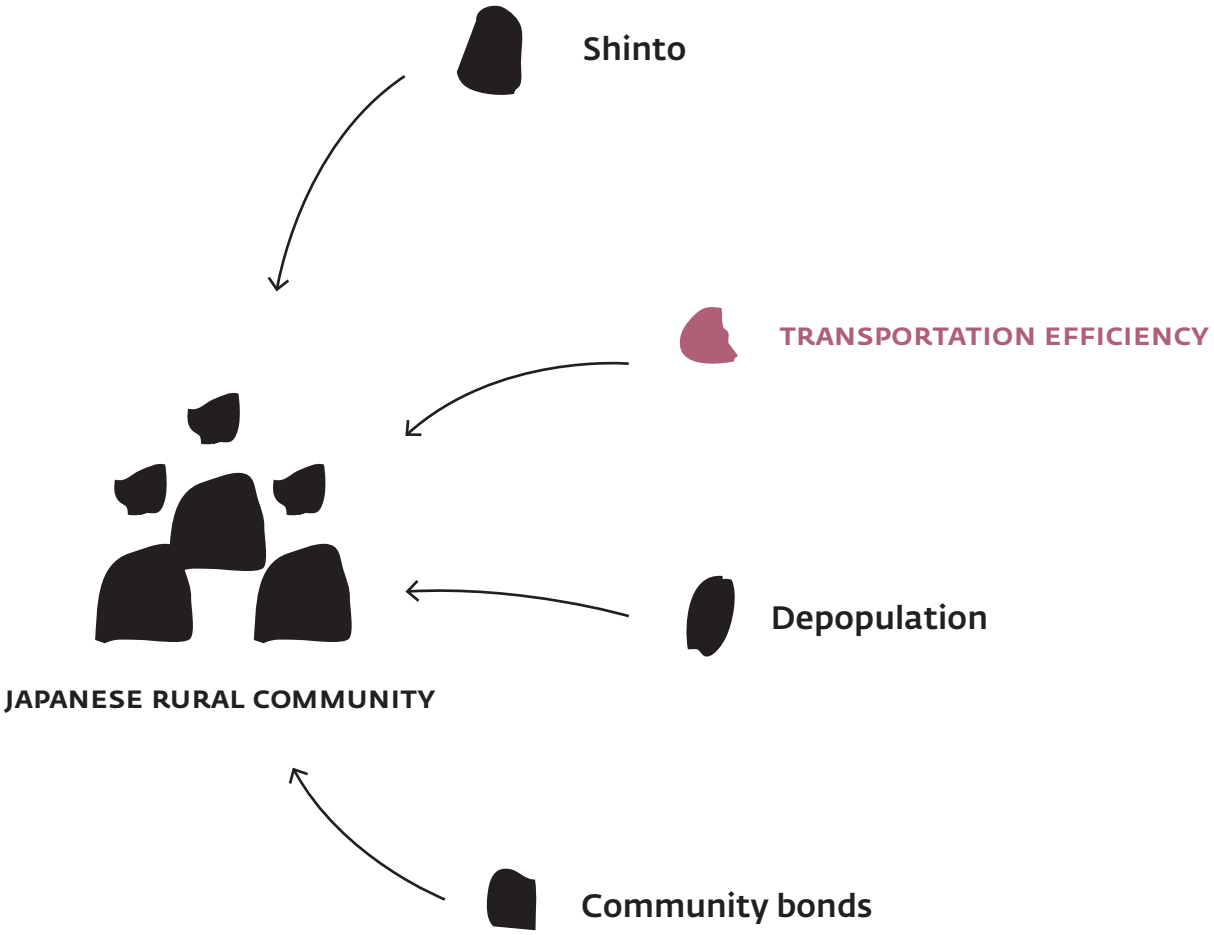


Figure 5.0, Influences on the rural communities of Japan

Conclusion

Role of mobility in the everyday life of the community members

Japan is a context replenished with contrasting elements between tradition and innovation. Strong technological development of the country's urban areas left the rural regions seeking novelty which would bring progress in the easement of life, comparable to urban settings.

One example of such a need for progress is recognised within the domain of mobility efficiency.

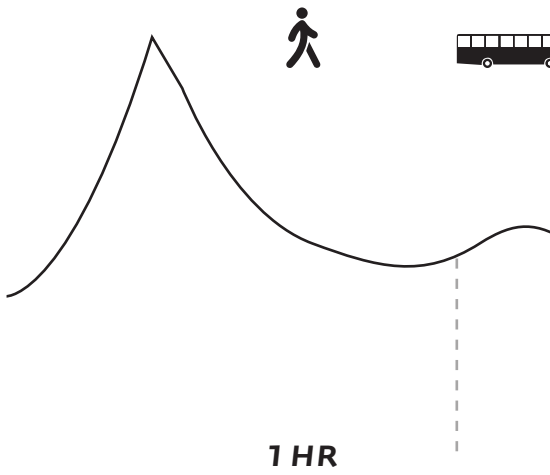
In specific terms of transportation efficiency, the rural communities developed a local transportation service, believing the public transportation is inefficient.

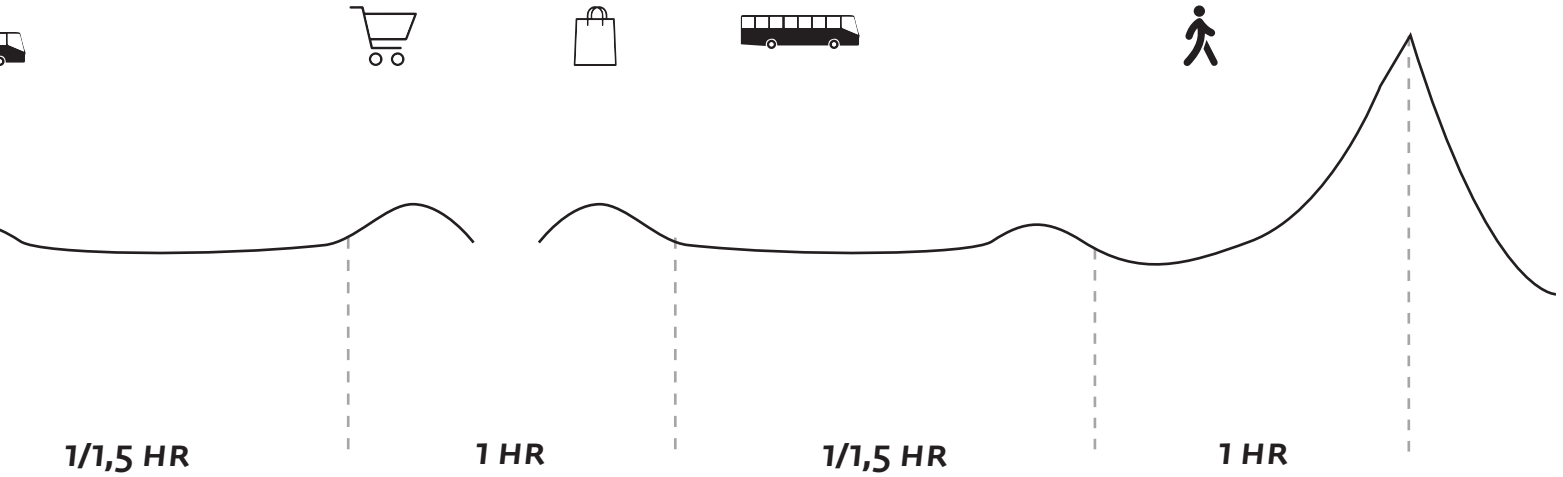
The Tokushima City Bus was regarded as unsatisfactory [Appendix Method], given that its rare schedule is resulting in a user's feeling of dependency. Since the rural areas are, generally, dispersed with segregated communities in various regions, the residents are mostly driving. Subsequently, the public bus is mostly empty and is, therefore, deemed expensive and inefficient.

Due to the predominantly elderly population, the driving capabilities of the residents are decreasing. Therefore, the local volunteer drivers, self-organised in a communal 'taxi' service. The driving capable individuals offer a ride in a private car, to their non-driving members. The community taxi developed as a response of the local areas to public transport.

However, the taxi services are offered at a higher price in comparison to the public bus and are unavailable if there are no accessible drivers.

As members of the Japanese rural community rely on personal vehicles and enjoy the sense of independence from the drive, the use of cars is considered a necessity. A space for innovation in the field of personal vehicles is acceptable, as users believe the personal vehicles could be improved in the fields of autonomous driving, and electrification of the vehicles [Appendix Method].





Example of dependency on public transportation is elaborated in a figure 6.0.

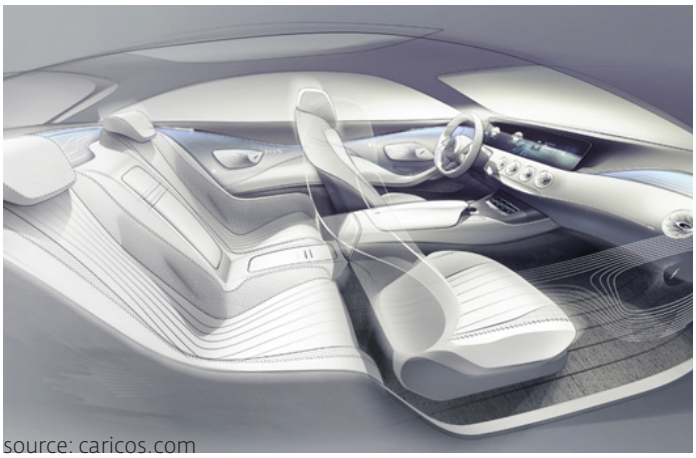
The overview depicts a shopping routine of the Kamikatsu resident, Shiro.
Due to the dispersed living area, it takes Shiro an hour of walking down the mountainside to reach the bus stop. The bus is taking, approximately, an hour ride to the nearby town, providing Shiro with an opportunity for buying the necessities.

The shopping duration is dependant of the bus schedule, providing Shiro with an occasion to take the bus back to Kamikatsu.

The walk from the mountain foothill to the top includes Shiro carrying the bought items.

Deconstruction of the Product
Product values

Figure 7.0, S-class coupe interior



source: caricos.com

Figure 8.0, Main components focused on driver

source: caricos.com

Interior segments

The current Mercedes-Benz layout is the product of a package designed assuming the need for the driver maintaining full control of the car and with an interaction to the dashboard, steering and pedals.

The interior is standardised with the dashboard and steering in the front, accompanying driver and front-row passenger seat, separated by the middle console.

The back area, created by the division of the in-row seating, remains reserved for the passengers. The two distinct areas, front and the back, are connected by the open area above the middle console, acting as a meeting point of the interior.

Brand values and elements of luxury

Mercedes-Benz is a premium vehicle manufacturer. The representation of luxury and status within its products is on par with brand values, developed out of the company's heritage and promising the best for its customers.

The expression of the luxury within the brand products is multifold. It is found in the perfection of engineering excellence, meticulous attention to build quality, a desire for the leading innovation, and experience of comfort.

Engineering Perfection

From the early days of the vehicle developments, the premium of Mercedes-Benz is expressed in the strives for engineering excellence and vehicle performance by exemplary innovation and sportsmanship represented in the main components directed at driver.

Figure 9.0, Interior detailing with high-quality material finishes

Figure 10.0, Implementation of digital systems

Build quality
The build quality of the product, represented through high production standards, meticulous design, construction, and high-quality material finishes, aims to reflect the craftsmanship once needed for the development of Mercedes-Benz vehicles.

Leading innovation
A desire for the leading role on the market is expressed through high strive for technological innovation. The brand aims to provide responsible solutions, and assistive systems, leading in domains of safety and sustainability to ensure the best for its customers.

Within the interior, the application of the novel technology and its systems is represented through the use of displays.

Experiencing Comfort
Lastly, Mercedes-Benz's representation of luxury is expressed in the aim of surpassing the customer's desires. The feeling of the premium is about experiences within the interior of the product. Hence, Mercedes-Benz aims to provide the utmost feeling of safety and physical ease leading to comfort.

In terms of the interior characteristics, the form of Mercedes-Benz interior expression of the luxury changed over the years. However, the meaning of form, experiencing luxury through comfort remained constant in terms of the interior feeling.

Image by artebellum.com

Brand image

Figure 11.0, Pointing attention to interior detailing; materials furnishings and digital system of MBUX


source: Mercedes-Benz Japan Instagram


source: Mercedes-Benz Japan Instagram

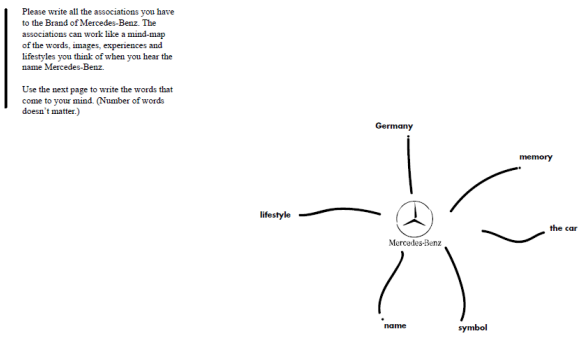
Perception in Japan

Within the Japanese context, Mercedes-Benz maintains the image of distinguished luxury built on expectations and deliveries of reliable and quality-build products, with leading innovation and technology.

The brand is positioned within the premium segment and is perceived on a slightly higher level of luxury, in a respective comparison to its European brand image.

Determining intended and unintended design qualities

Figure 12.0, Cultural probe questionnaire



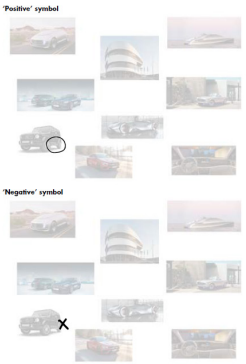
Research Question and Methods

Research question and method
The following paragraphs aim to summarise the method and findings of the field research answering the question of; 'How is Mercedes-Benz perceived by the rural community of Japan (i.e. Brand Image)?'

The design qualities related to the brand were examined through the cultural probe [20, 21] questionnaire. The questionnaire served as a sensitization material [20, 21], giving the possibility for the participants to explore their choices of the words and images related to the perception of the brand. The questionnaire was followed by the interview, allowing the participants to reflect and additionally elaborate on their answers.

The cultural probe consisted of three parts;

Part 1: Assigning the associations to the brand; putting all the associations to the brand 'to the surface',



All of the images shown in the collages on the next page are products of Mercedes-Benz.

Please indicate the images you most strongly connect to the Brand with one of the 'positive' symbols. Also, please indicate the ones you strongly don't connect to the Brand with one of the 'negative' symbols.

02

ブランドイメージ /
Brand image

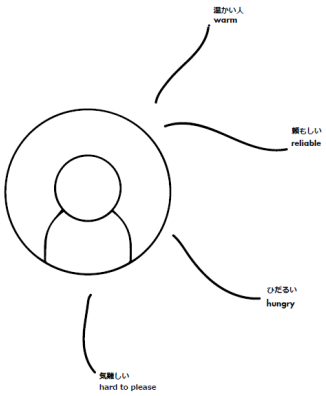
03

メルセデスベンツが人なら…？ /
If Mercedes-Benz was a person…?

Imagine Mercedes is a person. What sort of person would he/she be? Is he reliable? Does she always seem elegant? Would you be best friends, or would they be an aquaintance?

What sort of a relationship you think you would have with this person? What sort of qualities does this person posses (both positive and negative)? Write these qualities, and add/send me a picture of a person/ character if you want.

(Additional help; think back of situations when you were in contact or had any experience, interaction with Mercedes; what did you think, how you felt?)

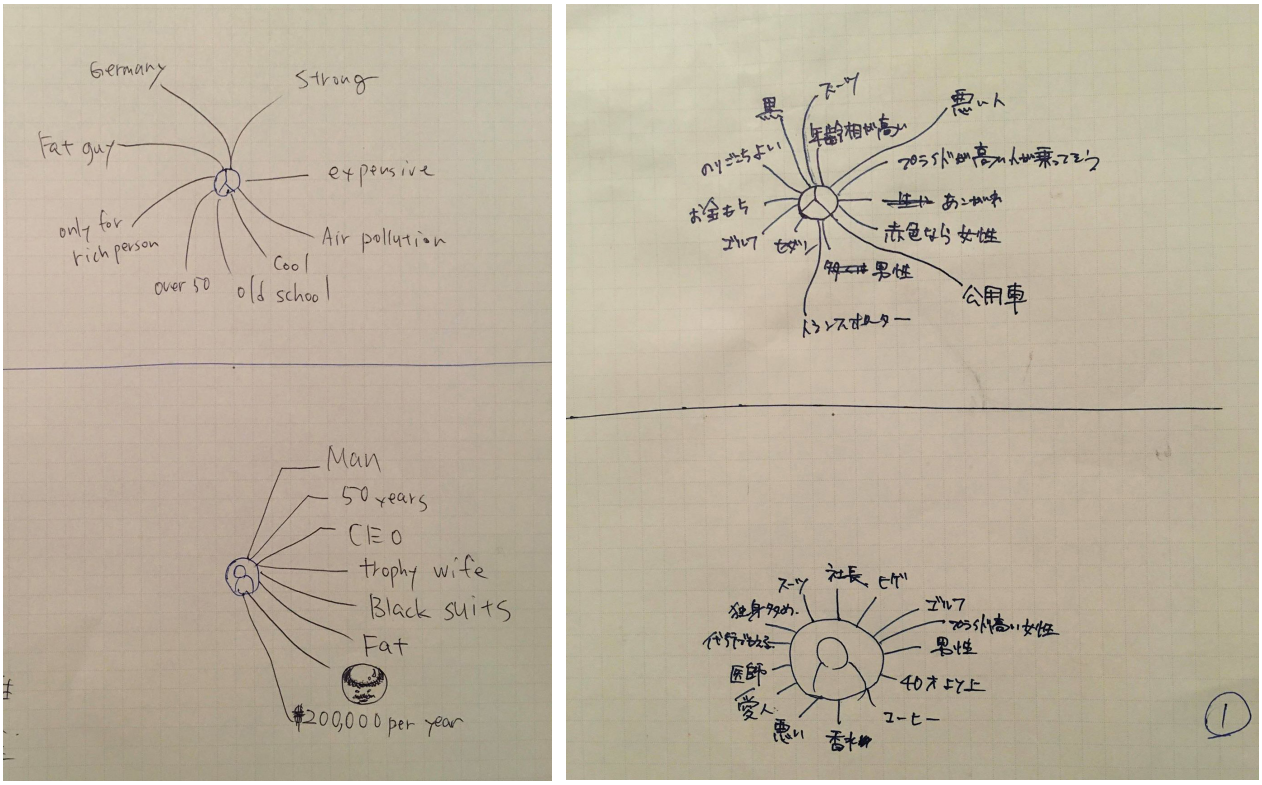


Part 2: Choosing the images most strongly connectible to the brand; reviewing the images of the brand products and choosing the ones most relatable, followed by the discussion why these images are the strongest connection to the brand

Part 3: Assigning ('human-like') qualities to the brand; 'brand as a person' exercise designed as a task for enabling people to reveal the notions relatable to the brand, usually found below the surface level of the description [20, 21].

The questionnaire was filled in by participants of different age groups, from the areas of Kamikatsu and Tokushima.

Figure 13.0, Results of the questionnaire



Resulting Qualities

Resulting qualities of the Brand image were recognised and assigned:

Intended
- elegance,
- class,
- luxury,
- style,
- competitiveness (sporty)

Unintended
- unattractiveness, over-confidence,
- being 'over the top', loud,
- attention-seeking

The in-depth interview provided elaboration for the resulting qualities.
The stimuli for the intended qualities were found in the elegance of the long lines, (interpretation of the) proud stance of the car and the high-class style due to the choice of the expensive/quality materials. The brand was also regarded as reliable and sturdy.

The unintended qualities were related to the stereotypical image of the 'usual Mercedes-Benz customer', and the exterior qualities of the strong representation of the grill and the logo. The stereotypical image of the Mercedes-Benz customer is an impression of a person expressing a financial and social status through the brand's product. The exterior qualities and representation of the grill and the logo was perceived as the attention-seeking and desirable by the people who are aiming to establish a status of importance within the society. These qualities were regarded as 'over-the-top' and 'loud' within the context of rural areas.

YOU'RE NOT BUYING A CAR.

YOU'RE BUYING A BELIEF.

THE NOTION OF BUILDING A MERCEDES-BENZ HAS ALWAYS BEEN AN EXCEPTIONALLY MEANINGFUL ENDEAVOR. MORE THAN MAKING A MACHINE, WE ARE UPHOLDING AN IDEAL. MORE THAN SIMPLY TURNING OUT NEW MODELS, WE ARE ADVANCING AN ENTIRE INDUSTRY WITH EVERY NEW INNOVATION.

From the very beginning, from the moment we built the first automobile back in 1886, the world was watching. Learning. Adoring. We won races, design awards and recognition for safety developments. In turn, we earned the respect of every true automobile aficionado the world over.

2006 will be no different. The introduction of the new S-Class will once again raise the industry to new heights. In technology, design, performance and luxury, the car unveils an altogether unprecedented level of achievement. And demonstrates a belief that as long as we strive for the highest possible level of integrity in everything we do, there will be people on this earth who appreciate it.

Unlike any other.

Mercedes-Benz

Image by merkleyandpartners.com

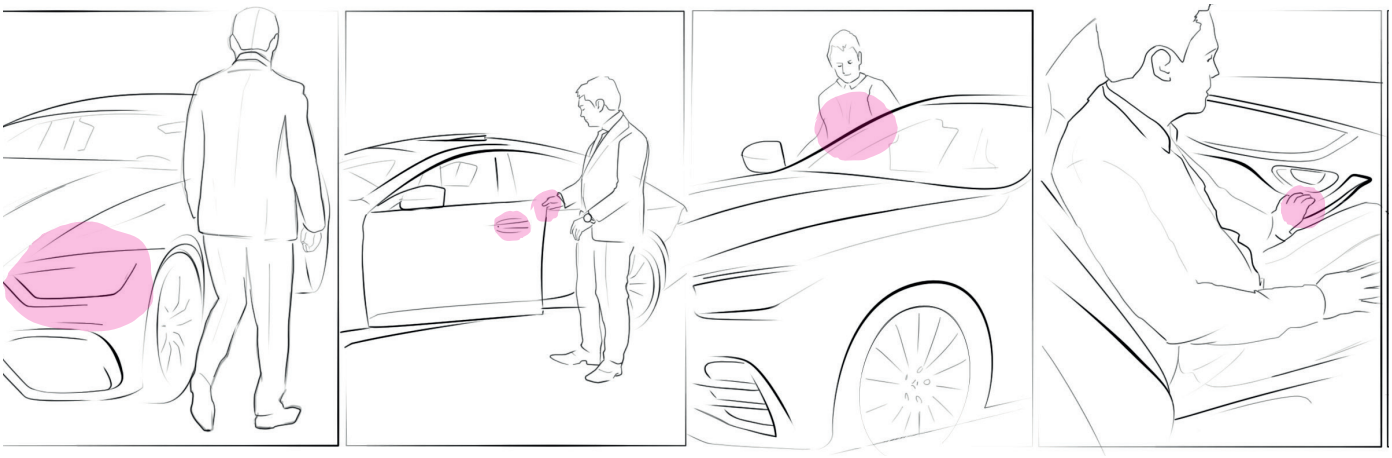
Image by Mercedes-Benz.com

Deconstruction of the Current Interaction

The interaction with the product describes the relationship between a product and the user. [11]

The current user interaction with Mercedes-Benz is marked by the obedience of a powerful product.

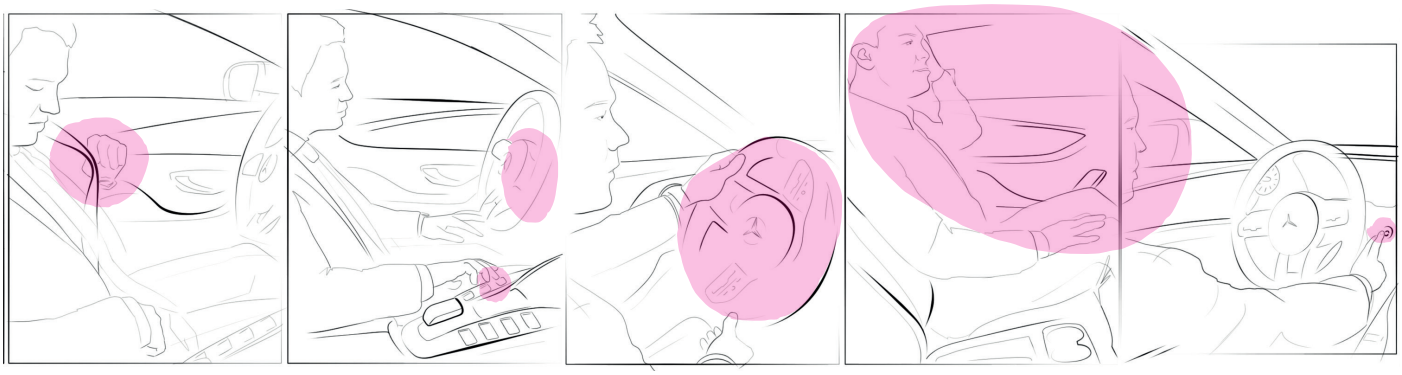
ACTION	**ACTION**	**ACTION**	**ACTION**
approach / unlock	open the door	getting in	closing the door



NEED	**NEED**	**NEED**	**NEED**
security	autonomy security	security	security
Feeling safe and as everything is under control as Mercedes-Benz ‚greets' the owner the way it usually does.	*As usual, Mercedes-Benz supports desired actions as it helps even with the simplest tasks; everything works smoothly, as it is supposed to be.*	*Routinely entering the Mercedes-Benz means entering the personalised environment.*	*Subtle support of actions, sounds of t indirectly reminding of safe start.*
TOUCHPOINT	**TOUCHPOINT**	**TOUCHPOINT**	**TOUCHPOINT**
light/audio response	easement of doorknob and the doors	seating comfort	easement of the doors
EMOTION	**EMOTION**	**EMOTION**	**EMOTION**
pleased	at ease	moving	engaged
INTERACTION QUALITY	**INTERACTION QUALITY**	**INTERACTION QUALITY**	**INTERACTION QUALITY**
welcoming greeting seamless	effortless supportive responsive	accepting greeting	acknowledging recognising responding compatible

Figure 14.0, Storyboard of current interaction of user with Mercedes-Benz

ACTION	ACTION	ACTION	ACTION	ACTION
adjusting: putting on the seatbelt, setting up for the journey	journey set-up: communicating to the digital UX	driving	in-drive communication; - with the car - with fellow passengers	powering off



NEED	NEED	NEED	NEED	NEED
security	security autonomy	autonomy competence stimulation	stimulation relatedness	autonomy security
the door closing and belt locking, are	*In the vehicle, everything is set up by the individual's personal preferences. As such, it serves the owner exactly as it is expected.*	*Taking control of your Mercedes-Benz provides an exciting and responsive driving experience. The vehicle is respecting the owners' wishes while providing the thrill of sports driving.*	*The divisions within the seating arrangement are giving the impression of space within space. It is leaving enough options for seclusion or interaction with other passengers; at the will of the user.*	*The dashboard is ready to comply with the owners' wishes communicated through the controls.*
TOUCHPOINT	**TOUCHPOINT**	**TOUCHPOINT**	**TOUCHPOINT**	**TOUCHPOINT**
pull of the belt, (clicking) sound of the fitting	digital system environment; audio/visual responses, sound of the car starting	steering instruments, audio/visual signals from the dashboard, sound of the car in drive	review mirror, open space of the car	dashboard controls and audio/visual signals
EMOTION	**EMOTION**	**EMOTION**	**EMOTION**	**EMOTION**
secure engaged	entertained	in control excited	connected included at ease entertained	content satisfied
INTERACTION QUALITY	**INTERACTION QUALITY**	**INTERACTION QUALITY**	**INTERACTION QUALITY**	**INTERACTION QUALITY**
protective reassuring	intuitive compatible straightforward	obedient supportive responsive complying reassuring	at will indirect divided/secluded/shared involved/uninvolved	complying agreeable/amenable

ACTION

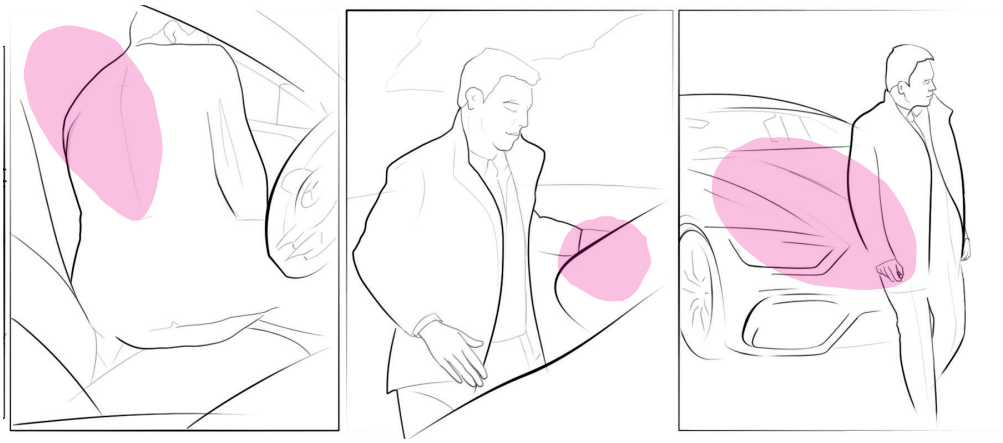
getting out

ACTION

closing the door

ACTION

walking away, locking



NEED

autonomy
competence

NEED

autonomy
popularity

NEED

popularity
security

Upon reaching the destination, the user and Mercedes-Benz accomplished the goal. The owner is safe to proceed with the desired tasks as Mercedes-Benz loyally waits.

As the attention is being drawn upon possession of the Mercedes-Benz, the confidence and self-worth are confirming within the owner. The subtle responses to locking the car, as active ‚farewell's', are supporting the social strength, and building an image of personal success.

TOUCHPOINT

easement of the doors

TOUCHPOINT

complying of the doors

TOUCHPOINT

light/audio reassurance, leaving Mercedes-Benz

EMOTION

satisfied

EMOTION

confidence

EMOTION

confidence
self-assured

INTERACTION QUALITY

encouraging
powerful

INTERACTION QUALITY

empowering

INTERACTION QUALITY

assuming respect

Qualities of the current interaction

The expectations of the Mercedes-Benz driver lies with the need for establishing the balance between the compliance of the vehicle in-drive and the (re-) assurance derived from the car's digital systems. Through different forms of interaction, the user is led to the final empowering stages, leaving the vehicle and reaffirming the status within the social structures.

The Mercedes-Benz customer is usually the person of the higher socioeconomic status. The clients usually tend to affirm the position of power through the luxury vehicle of high quality, as a reward showcasing their accomplishments.

Deconstruction of the Current context

Global Market position and Sustainability

With the Automotive industry at the turning point towards environmental sustainability, Mercedes-Benz is aiming to develop a vision for Sustainable Luxury. [2]

The progressions of the legislative and sustainable outlook for the future, aim at providing more space for the shared, environmentally unpolluting vehicles. [22, 23] Hence, the dynamic innovations and responsiveness of the brand to the contextual pressures resulted in the development of a fully electric platform, EQ, along with the CASE strategy.

The CASE strategy is a corporate strategy intended to cope with upcoming industry challenges. [24, 25]. It stands for connected, autonomous, shared and electric. The strategy is enabling Mercedes-Benz to assure it's presence on the global mobility stage, with the innovative, sustainable solutions in rank with the societal demand of autonomous, shared vehicles.

Image by Mercedes-Benz.com

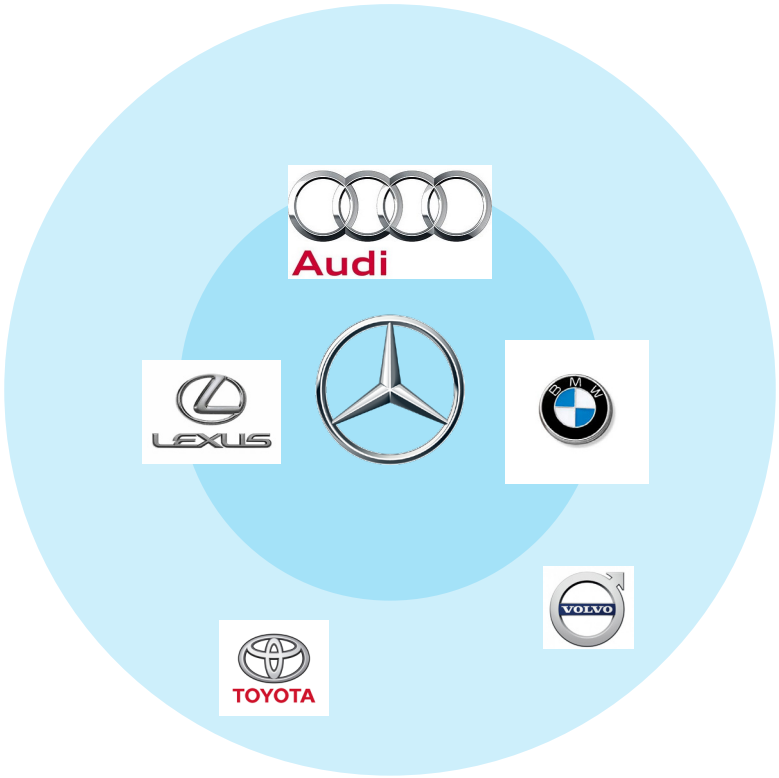
Figure 15.0, Mercedes-Benz as mobility provider

Mercedes as mobility provider

Introduced by the CASE Strategy the Mercedes-Benz implemented mobility services.

As car-sharing of the future entails a reduction of vehicle demand, Mercedes-Benz is forced to develop innovative business strategies. Mercedes-Benz introduced the range of offers as a mobility service provider, some of which include car-sharing (car2go, charge@work), ride-hailing (FREE NOW), taxies, bikes and public transport options (moovel), as well as customer assistance (MercedesMe). [26]

Figure 16.0, Current market and competitors



Mercedes in Japanese market

On the Japanese market, Mercedes-Benz is positioned within the segment of the premium vehicles.

The main competitors for this segment being Lexus, BMW and Audi.

Mercedes-Benz is currently the best-selling international and premium brand in Japan. [27]

The A, B and E-class are most represented in the Japanese countryside, whereas S-class and Mercedes-Maybach remain reserved for the urban areas.

The main competitor to Mercedes-Benz within the Japanese context is Toyota's premium brand Lexus. [28]

Inspired by the unparalleled Japanese hospitality, the brand's vision is to 'treat each customer like they would treat a guest in their own home'. Lexus profiled as a premium brand of exceptional customer service and reliability, catering to brand loyalty.

In order for Mercedes-Benz to remain on a leading position in the market, a vision for a uniquely Mercedes-Benz interior feeling of customer care needs to take place. [29]

Image by media.daimler.com

b: Design decisions

Stimulating factors for the future

The context clusters were built by the gathering of context factors [Appendic Factors]. During the analysis 8 context clusters were developed to generate future context.

Factor clusters

Growing the future
Mankind seeks to co-design with nature, applying the contributions of novel biodegradable and biobased materials for consumable and often replaceable goods.

Intensity of autonomy
With the advancements of autonomous technology, the change of user behaviour and demand brings to intensity of use. Observed as spaces on wheels, rather than passenger transportation means, the vehicles are shared and used for multiple purposes, at all times. The intensity of use brings about the shorter lifespan products, thus producing a greater need for their substitution.

Self-reliant community
The emergence of self-reliant communities develops as a result of population migration towards urban areas. The community development is followed by the construction of the personal sets of values in preserving themselves and taking care of each other.

Way of the gods
Ritualistic philosophies of respect for ancestors, heritage, and minimalism in balance to the awe-inspiring aspects of nature transpires to be conscious of the purpose and the way of the kami (god/s).

Human as part of the natural world
Escaping the human-made world for the unique benefits of being part of nature.

Brand from within
Minimalism rising as an aesthetic response, giving the way to the meaning derived from the experience.

Sharing intimacy; the ritual of respect
Approaching people with respect means leaving space for them to feel comfortable and have their own space, even if shared with others.

Human-made world ailment
Mankind mentally becomes disconnected from nature and influences it's further mistreatment, ailing itself in the process.

Figure 17.0, Factor clusters

Growing the future;

Intensity of autonomy

Self-reliant community

Way of the gods

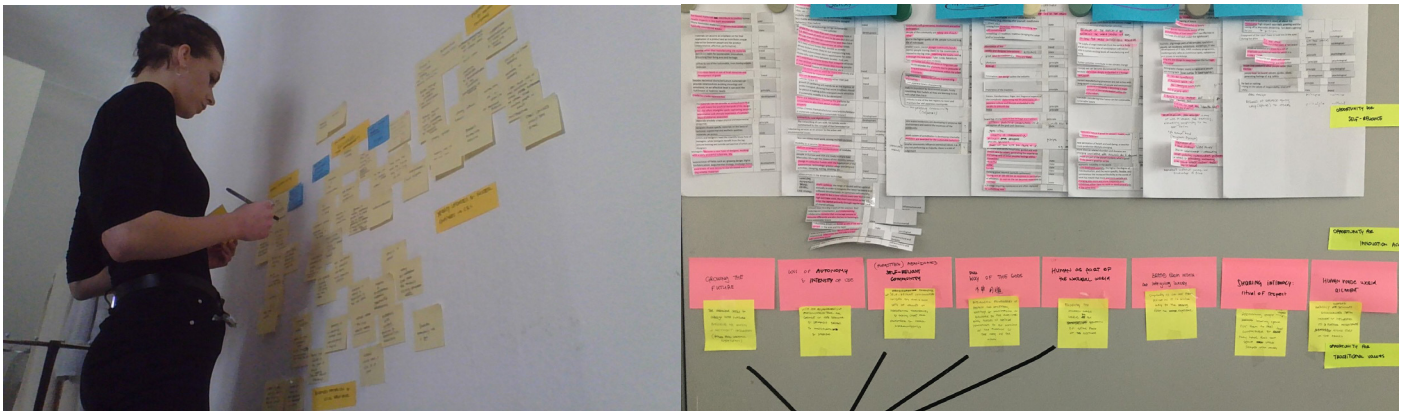
Human as part of
the natural world

Brand from within

Sharing intimacy;
the ritual of respect

Human-made world ailment

Figure 18.0, Cluster structuring



Structuring the factors

The clusters groups were analysed based on their relationship towards the domain.

Each group was aligned along the axis based on the possibilities of providing an 'opportunity' or a 'threat' for each of the domain core elements.

Self-reliance

The domain presents the self-reliant communities focused on active participation in community matters. The factor clusters like 'Growing the future' and 'Human as part of the natural world' could provide the opportunity for such communities by enabling the possibilities for active participation in sustaining themselves by co-creation with nature. 'The human-made world ailment', might, in contrast, suggest a possible threat of urbanisation and destruction of the unique community bonds.

Innovation acceptence

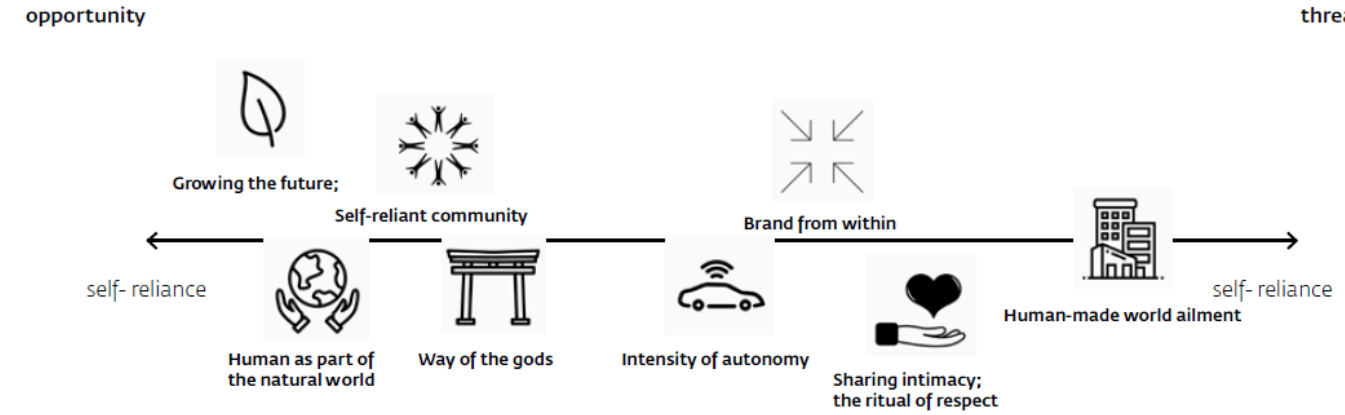
The people of the domain are open for innovation acceptance, provided it is developed on the (traditional) values of the community. The clusters related to the preservation of values such as respect, like 'Sharing intimacy, the ritual of respect' could provide an opportunity for innovation acceptance. 'Self-reliant community', however, could imply a possible threat if the community does not leave space for the development of innovative products, based on the fact that they do not employ active participation from the community.

Traditional values

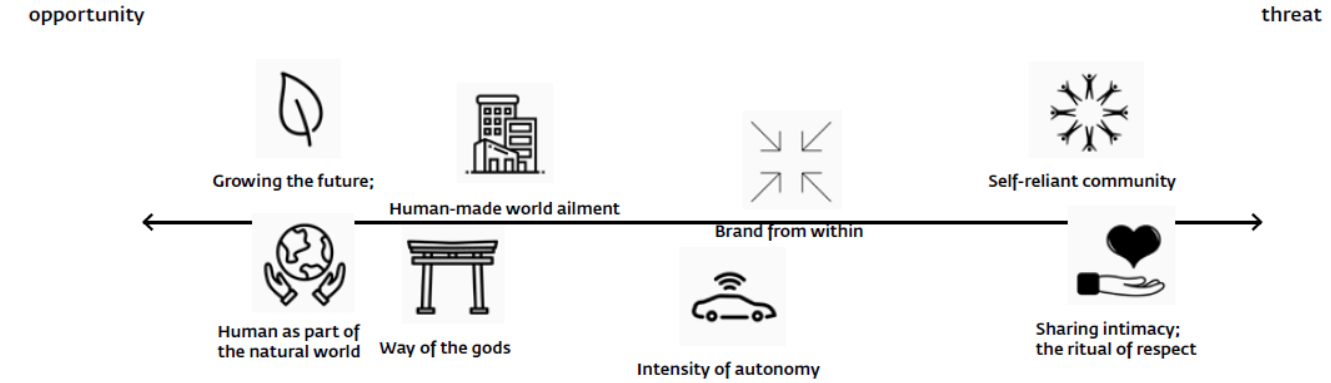
The cluster such as 'Way of the gods' could provide the opportunities for embracing the traditional values based in e.g. Shinto. The 'Intensity of Autonomy', on the other hand, might threaten this aspect by striving further away from balance with nature.

Figure 19.0, Clusters based on relationship towards the domain

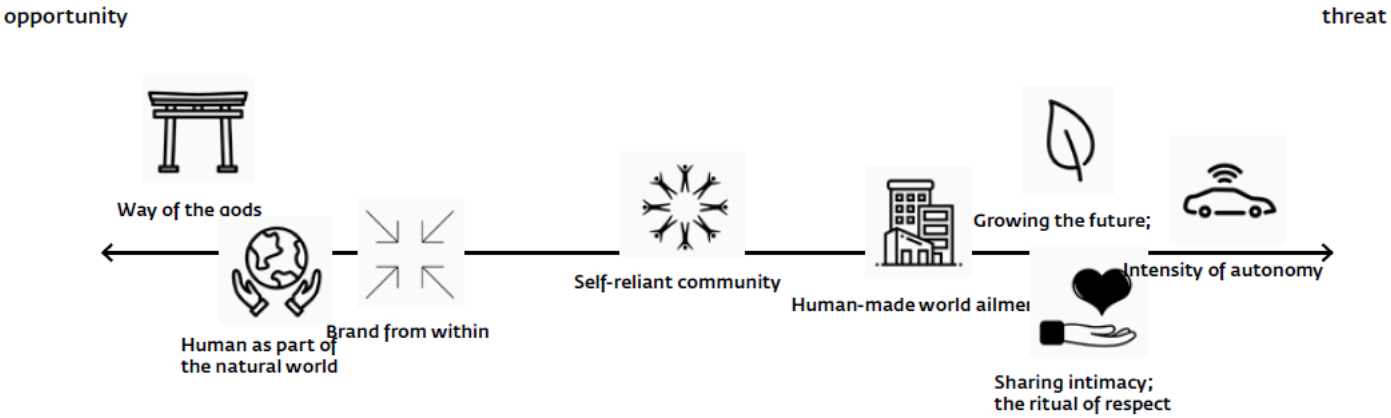
SELF - RELIANCE



INNOVATION ACCEPTENCE

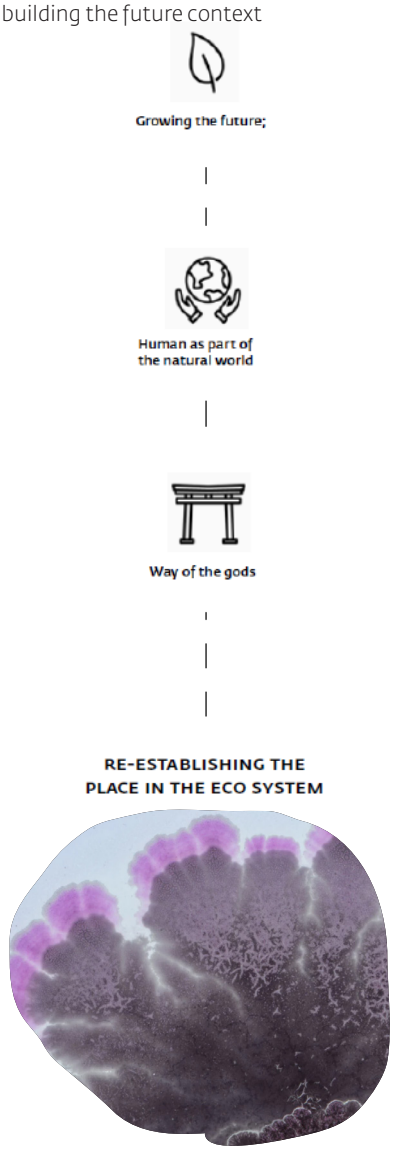


TRADITIONAL VALUES



The new context
From factors to requirements

Figure 20.0, Clusters building the future context



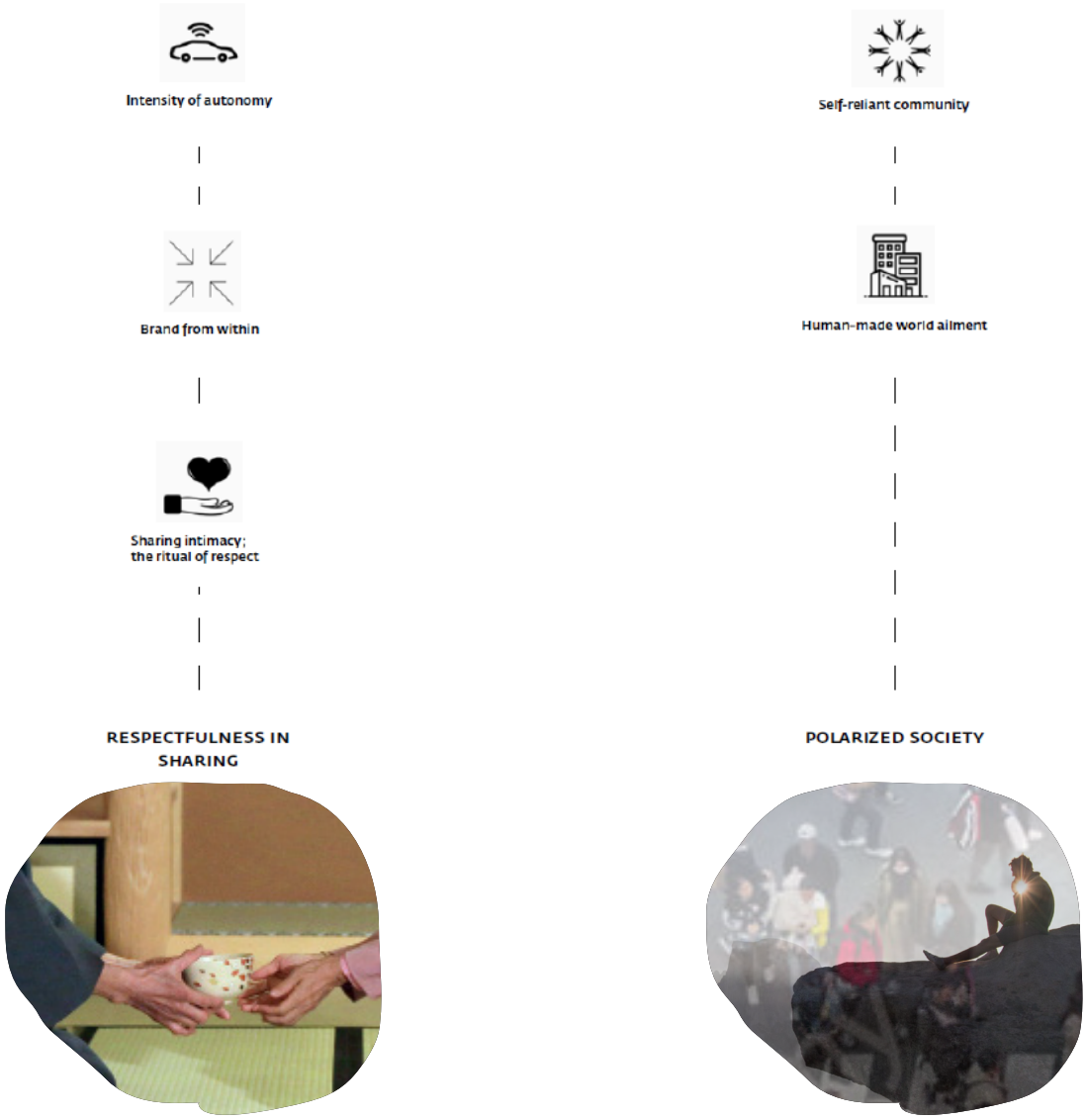
From factors to requirements

Based on the relationship between clusters and the domain, and the clusters among themselves, the new cluster groups emerged. The developed group formed the the building elements (requirements) of the context of the future.

Biomaterial future

Clusters related to the sustainability in terms of preserving the nature, biomaterials, Shintoism and 'way of the gods', provided 'Bio-material' group.

The developments in the fields of biodesign enable people to grow the materials and co-create with nature. The biodegradable materials become widely available and employed in consumable goods. The human physical world becomes more environmentally acceptable. Due to the biodegradable aspects, the products reaching the end-of-life shift to useful resources for the development of new products. This transformation provides for circulatory efficiency of goods.



Minimalism as a form of respect

The seemingly opposing clusters of the 'Intensity of autonomy' and 'Sharing intimacy' brought upon the issue of respect. Respectfulness in sharing, upon the future intensity of car use, brings about the modesty in action. 'A brand from within' therefore emerges as a resolution to minimalism, un-obstructiveness and modesty in use.

In future, the meaning of luxury takes on a new form.

More people will seek the minimalist environments symbolically substituting material possessions for immaterial and experiential fulfilment.

Segregation within a polarized society

The 'Self-reliant community', means building a world for itself, as opposed to the urban lifestyle of 'Human-made world ailment'. The community development is followed by the segregation and construction of the personal sets of values and traditions which generates a polarized community.

The segregation to the natural environment provides peacefulness and luxury of time to focus on oneself, otherwise denied within the rushed crowdedness of urban setting. The self-reliance and need for active contribution are generated by an individual need for purposefulness and preservation of traditional values within the collective.

Conclusion

The Design Gap
- A Reconciliation of the Sustainability and Luxury

At the current stage, Mercedes-Benz, as a premium vehicle manufacturer, expresses premium through design philosophy of Sensual Purity [30]. The luxury is embodied in precision, quality, and high-grade finish of modern luxury [31] Also, Mercedes-Benz offers possibilities for individualisation and customisation, [32] stemming from individual customers expecting and desiring more from the physical and material attributes of the design.

The identified design gap is based on premises of transformation within the aesthetical principles, and the needed response from Mercedes-Benz; from Modern Luxury to the ideal setting of Sustainable Luxury.

The future context implies a modesty in approach through respectful interaction in a shared interior setting. A desire for a minimalist environment, substituting material expression of luxury and status, for experiences, suggests a transformation towards a new idea of luxury.

The redefinition of luxury provides an opportunity for Mercedes-Benz to profile as a unique mobility provider for selected communities, instead of individual users. Hence, the aesthetical principles and customisation could represent the unique qualities found at the crossroads of the brand and the community choosing Mercedes-Benz mobility services.

Image by silodrome.com

Image by Mercedes-Benz.com

Statement Definition

A mission statement describes the aims and ambitions towards the domain in the future context.

I want to achieve a perception of an abundance of less within the experience and perception of the product while keeping the identity of the brand intact.

The desirable perception relates to the minimalist product, generating the experience of the 'abundance of less'. A focus is shifted from the physical domain of the product to towards the richness of customer experience within the interior.

From the current standpoint of Mercedes-Benz, with 'loud' [Chapter 'Intended and unintended design qualities'] emphasis on luxury, a sudden minimalistic appearance might threaten the image of a brand, deeming it underwhelming.

Since this is an unwanted quality, to avoid a deterioration of the brand image within the upcoming design actions, the goal is established to preserve the identity of the brand intact.

Image by stocksy.com

Interaction Vision

The interaction vision elaborates on the qualities of the relationship between the product and the user. It provides an analogy describing the result in behaviour and/or feeling, elicited by the interaction with the product, and aligned with the mission statement for future context.

Encountering a moment for yourself, within a shared experience, in comfort.

Interaction Vision

The interaction should be like meditation, a precious moment dedicated to personal focus and reflection. Hence, encountering a moment for yourself, within a shared experience, in comfort.

Not all situations with acquaintances are comfortable. However, encountering a person with whom it is possible to share a moment in silence, provides a unique sense of comfort, security and easement. The meditation is an activity incorporating a respectful relationship to others, if not performed alone. Coming from the need and desire for individual focus, modesty in approach to other's needs and respectful understanding arises.

Figure 21.0, Interaction qualities

Interaction qualities and user relationship to the product.

The future product aims to fulfil the mission through the human-product relationship. As the mission intends to achieve an experience of an abundance of less while preserving the brand identity, the qualities of interaction should reflect intended behaviour.

Hence, the interaction qualities are compared and identified in the intended mission.

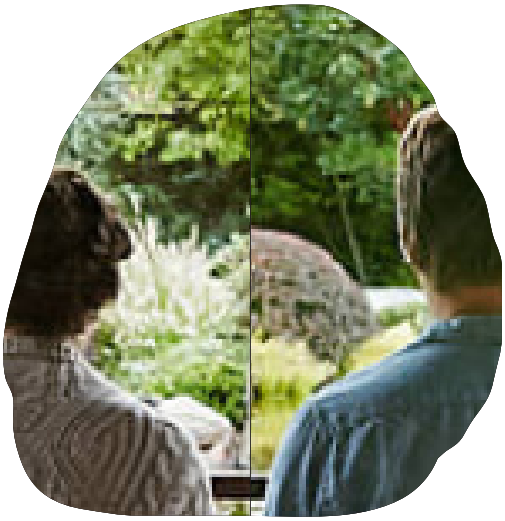
An experiential abundance of less is identified in:
(interaction qualities in brackets)

Un-obstructedness of the meditation moment (unobstructed)

A personal focus, devoting time to oneself (focused)

Indirect and respectful interaction with the others (indirect, respectful)

Independent in deciding whether a moment is spent in silence or shared with another person (independent)



An abundance of less in the perception of the product is identified in:

A minimal physical appearance, clean of all unnecessary elements (minimal, clean)

Intact identity of the brand is recognised in:

Providing unique personal experiences (unique)

A sense of safety in peacefulness, providing relaxation and comfort (comfortable)

Creative Process

Ideation

The ideation process consisted of four design phases leading up to the concept validation [Chapter Validation].

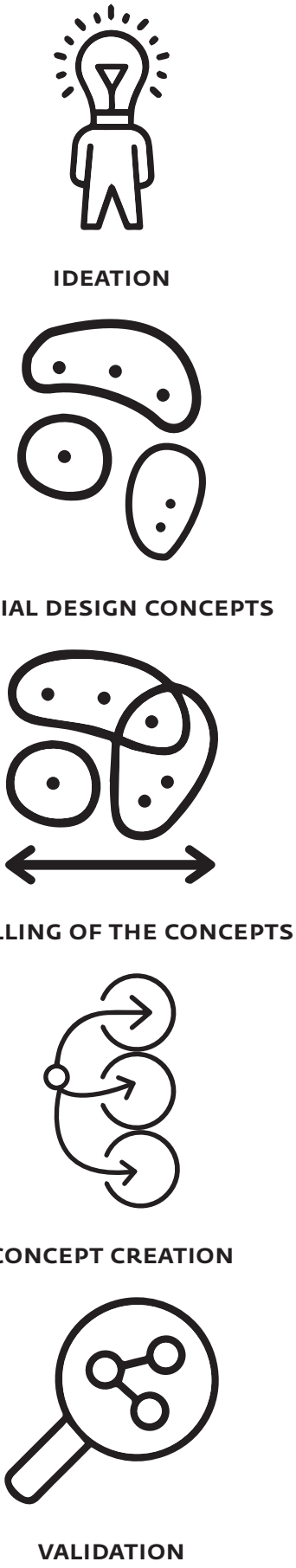
The first phase started with the development of design ideas [Appendix Concept Sketches]. Secondly, an evaluation of the design ideas, with company representitive, led to a selection of promising interior features in the following categories:

An element of uniqueness; providing a novel and distinctive attribute.
A centrepiece; a touchpoint area where passengers meet upon a desire
A privacy provider; a division element between passengers, providing privacy
A seating element; variations

Then, ideas were clustered into preliminary concept ideas. At first, the distribution of features within three initial concepts was uneven. Each of the concepts strongly reflected one of the building elements of the future context (e.g. the representation of biomaterials, [Chapter, 'The new context']), hence not embodying the potential of the interaction qualities in full.

Finally, the features were distributed equally, based on their qualitative properties and complexities. Therefore, the three developed concept directions are comparable and are further validated in [Chapter Validation] to assess which features are perceived as the most desirable.

Figure 22.0, Creative process



Concept 1

The first concept proposes a scenario imploying a Mercedes-Benz service that allows sharing of a personally owned vehicle with others. The car would have Level 4 autonomous driving technology supporting the driver. Sometimes, a car would drive autonomously, but a need for a driver remains.

The following features of the concept are tested:

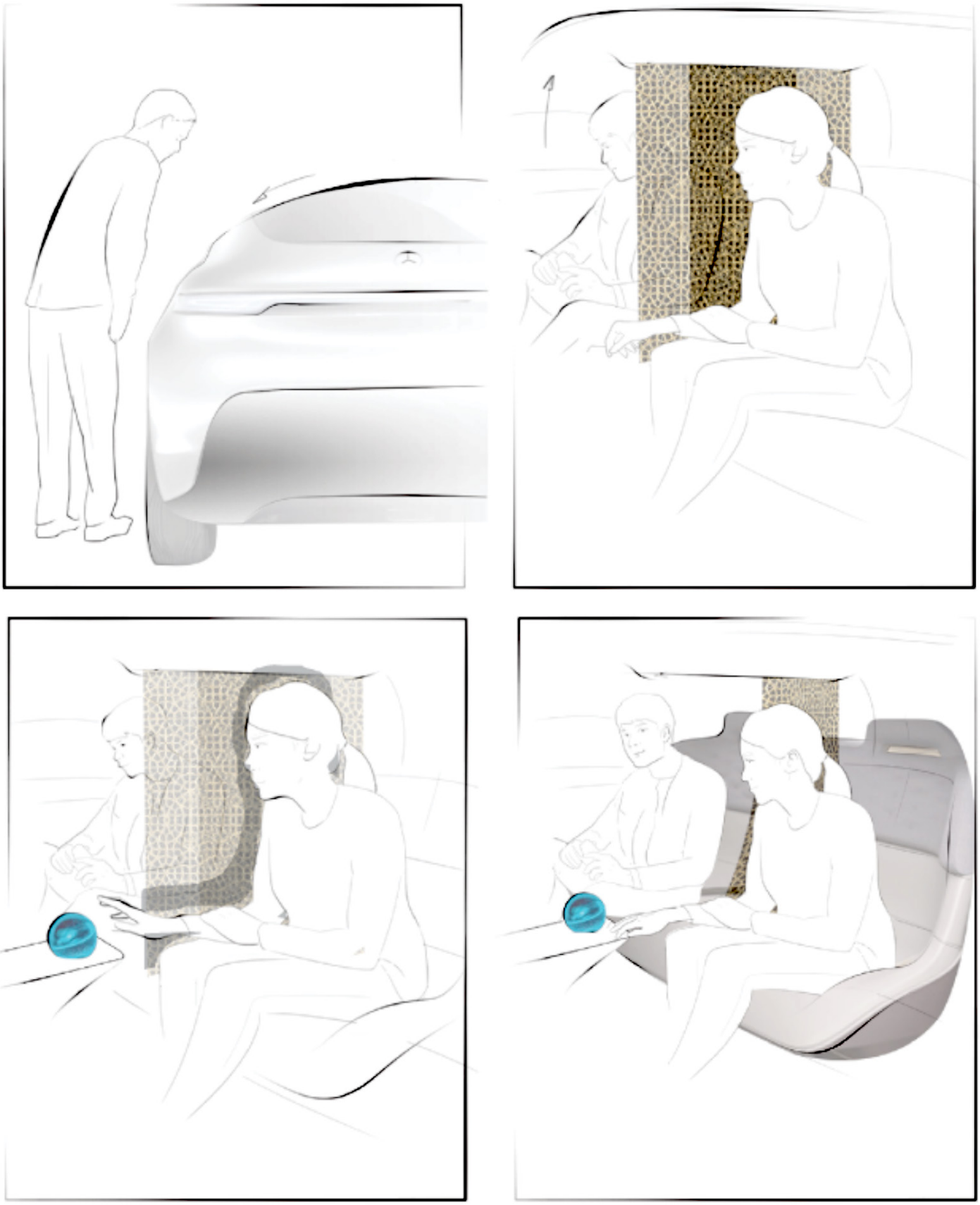
1. An element of uniqueness: greet by bowing
When a person is entering, the doors open and the car changes shape to greet by bowing. After a person enters, it changes back, to provide more space from inside.

2.A privacy provider: fabric divider
Between passengers, there is a sustainable, transparent fabric grown from plants. The division provides privacy but allows the person to see if someone is sitting next to them.

3. A centrepiece: ambient light
In the middle, a passenger can turn on the ambient light, thus casting the shade on the fabric. By doing this, it is possible to let another person know someone is there, whilst remaining 'hidden' by the shadow on the fabric.

4. A seating element: connected seats
However, if passengers would like to share a moment together, they can move the fabric. The seats are connected remaining on the users to choose how close or far apart they are sitting.

Figure 23.0, Concept 1



Concept 2

The second concept proposes a scenario imploying a Mercedes-Benz service allowing a customer to order a community car when needed. The car would have Level 5 autonomous technology excluding a need for the driver.

The following features of the concept are tested:

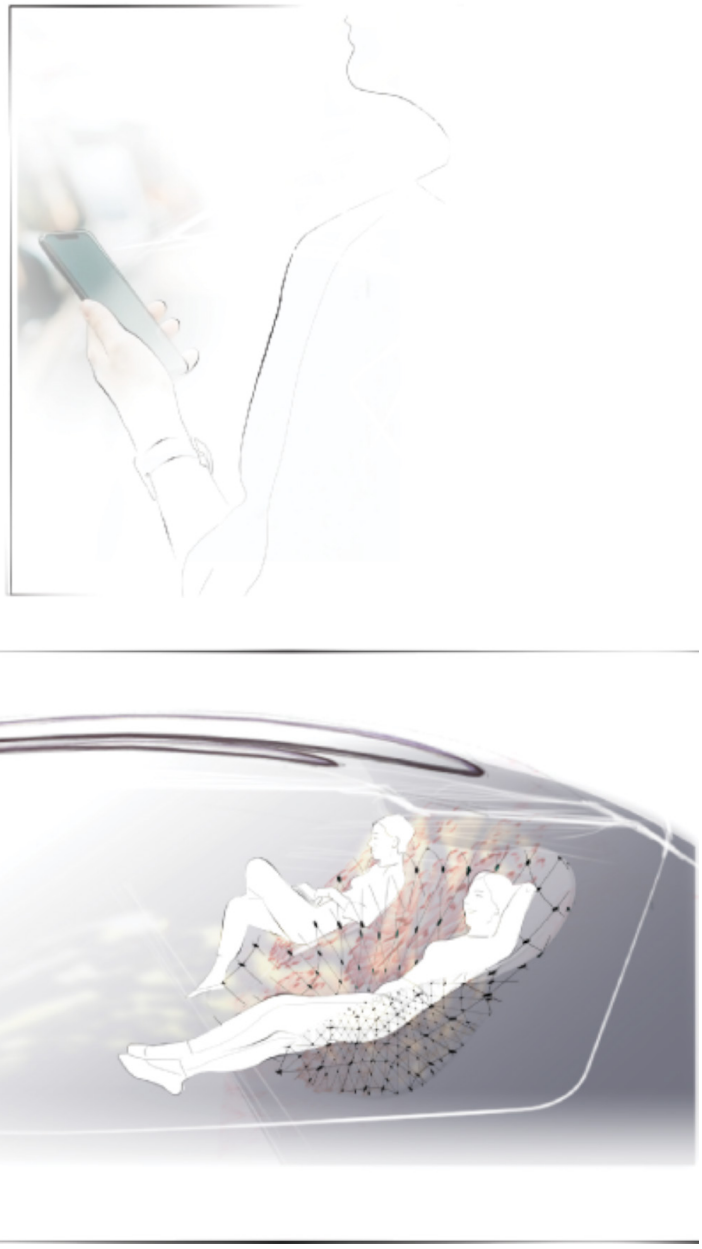
1. A privacy provider: Ride-sharing preferences
When ordering a car, customers choose to be alone in the car or to drive with others.

2. A seating element: Gloving mesh seats
Inside the car, the seats are made of supportive mesh, enabling relaxation or safe storage of things. The mesh shapes by a person sitting in it, so even when accompanied by others a person has his/her own place.

3. An element of uniqueness: Big windows on the roof
On the roof, large windows are providing a lot of light and the view outside.

4. A centrepiece: Grow the car
During the drive, a user can interact with the dashboard in the front. Made of living material, upon touching, it will slowly grow and change colour in response, leaving the mark of the user's presence.

Figure 24.0, Concept 2



Concept 3

The third concept proposes a scenario imploying a Mercedes-Benz service allowing a customer to order a community car when needed. The car would have Level 4 autonomous technology. Sometimes, a car would drive autonomously, but as a need for the driver remains, there would be an official driver.

The following features of the concept are tested:

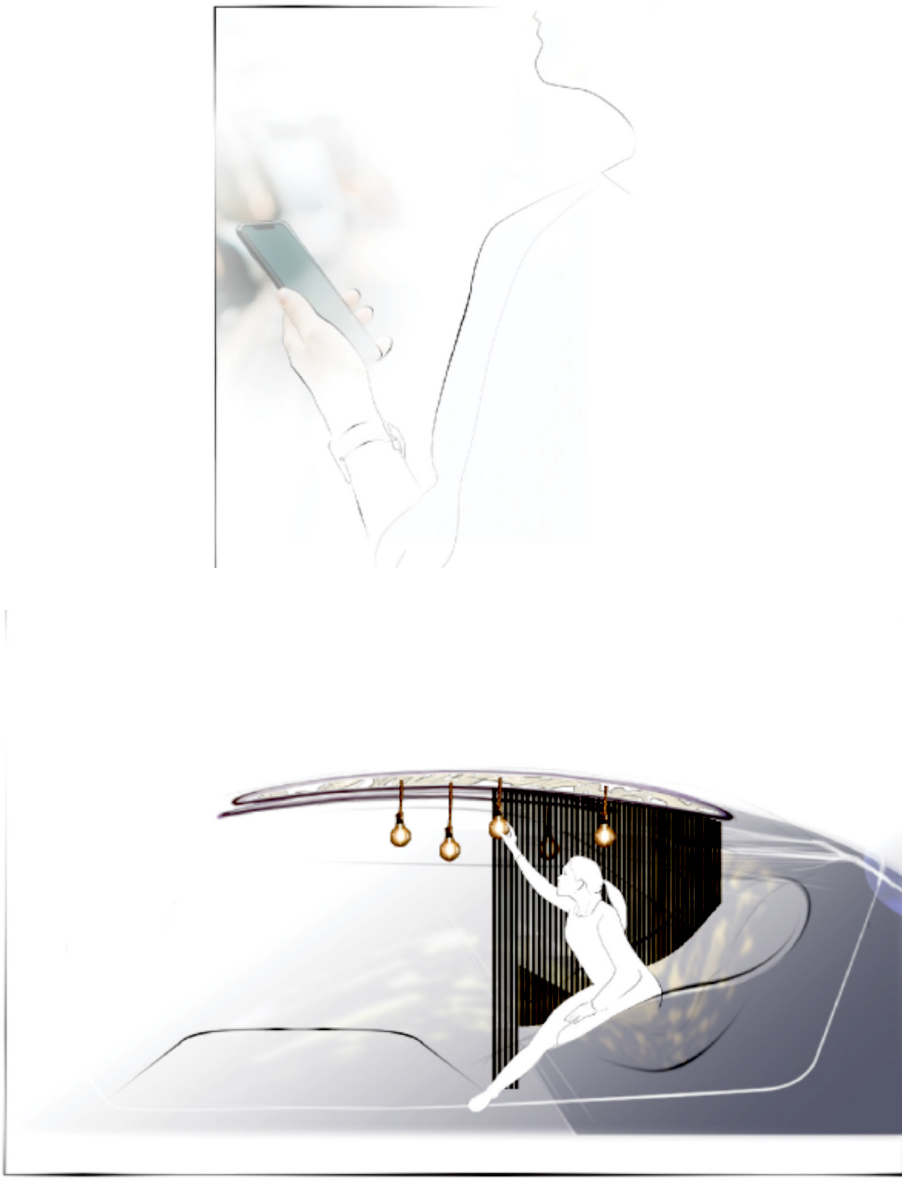
1. A privacy provider: Ride-sharing preferences and Cedar division
When ordering a car, customers choose to be alone in the car or to drive with others. If a person is driving with others a 'division' made of cedar wood branches, acts as a privacy provider accompanied by the unique fragrance of the wood.

2. The seating element: Individual seating
In the event of sharing a ride, the individual seating elements provide the personal space for a customer.

3. An element of uniqueness: Bio-luminescent lights
On the roof, large windows have a pattern of bio-luminescent lights (e.g. sea planktons). During the day the pattern is creating a play of light and shade in the interior. During the night the lights are lit and are responsive to the movement.

4. A centrepiece: Big central console
During the drive, if users wish to share a moment with others or work/read/create their ambience, the shared area around a big central console can be of use.

Figure 25.0, Concept 3



Validation

Research Question and Methods

The following validation refers to the appropriateness of the conceptualised design features to the domain.

In addition to the validation of features, the concepts explored:

- the relationship of the community towards the idea of driving a personally owned vehicle, vs. community vehicle.
- The desirability of sharing a ride with other community members
- The desirability of Level 4 and/or Level 5 autonomous driving technologies, posing a question about the need for a driver and trust towards a developing technology.

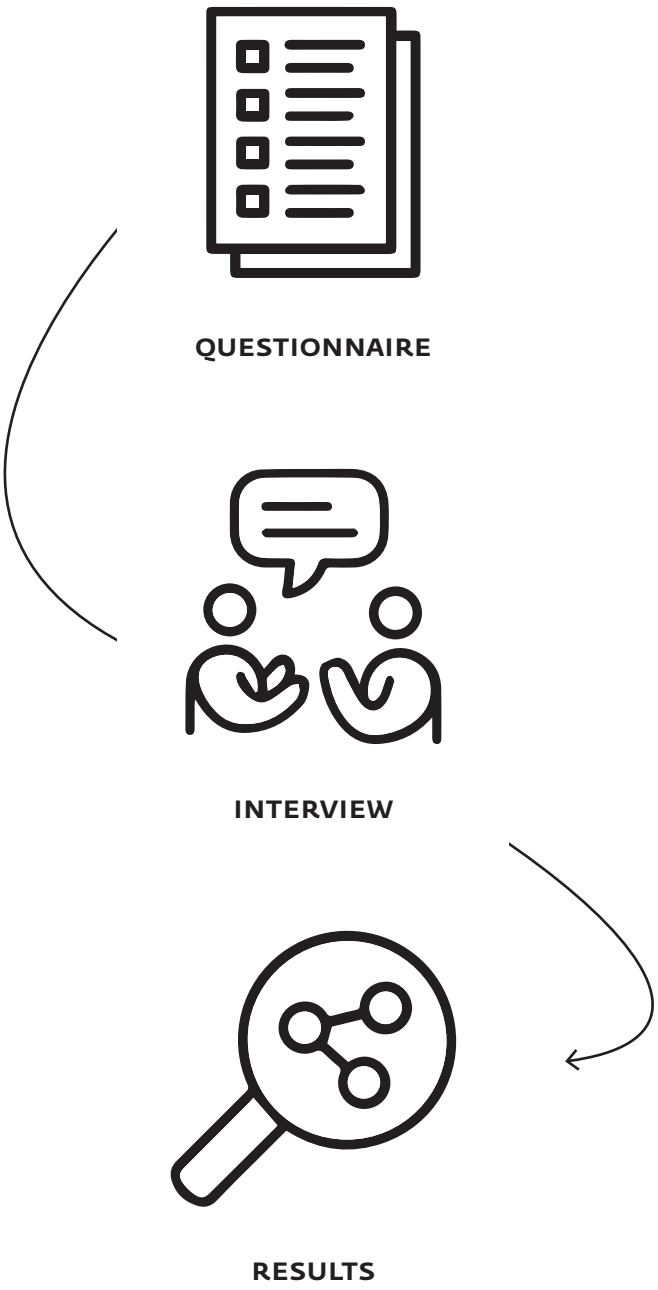
The validation included two participant groups,
- Mercedes-Benz employees, representative of brand values, and
- residents of the rural Japanese communities, representative of the domain values.

The validation was performed in two stages.

First, the participants were asked to fill in the online Likert-scales [33] questionnaire [Appendix Concept Validation]. The questionnaire depicted a concept scenario (Figures 23, 24, 25) to help the participants immerse in the use of the proposed design.

Following the questionnaire, a comparative interview [Appendix Concept Validation] was conducted asking more in-depth questions and allowing participants to elaborate on their choices.

Figure 26.0, Validation process



Results

After processing the collected data, the following results derived.

From the three concepts, the features rated the most desirable by both group representatives are as following:

A privacy provider:
Taken from the first concept a sustainable, transparent fabric, grown from plants was most rated as a feasible and desirable feature.

An element of uniqueness:
Patterned bio-luminescent lights, from the third concept, were chosen as a preferable element of uniqueness.

A centrepiece:
Based on the conducted interviews, the centrepiece feature was eliminated. In terms of the minimalist physical appearance, the remaining, chosen attributes were already regarded as abundant.

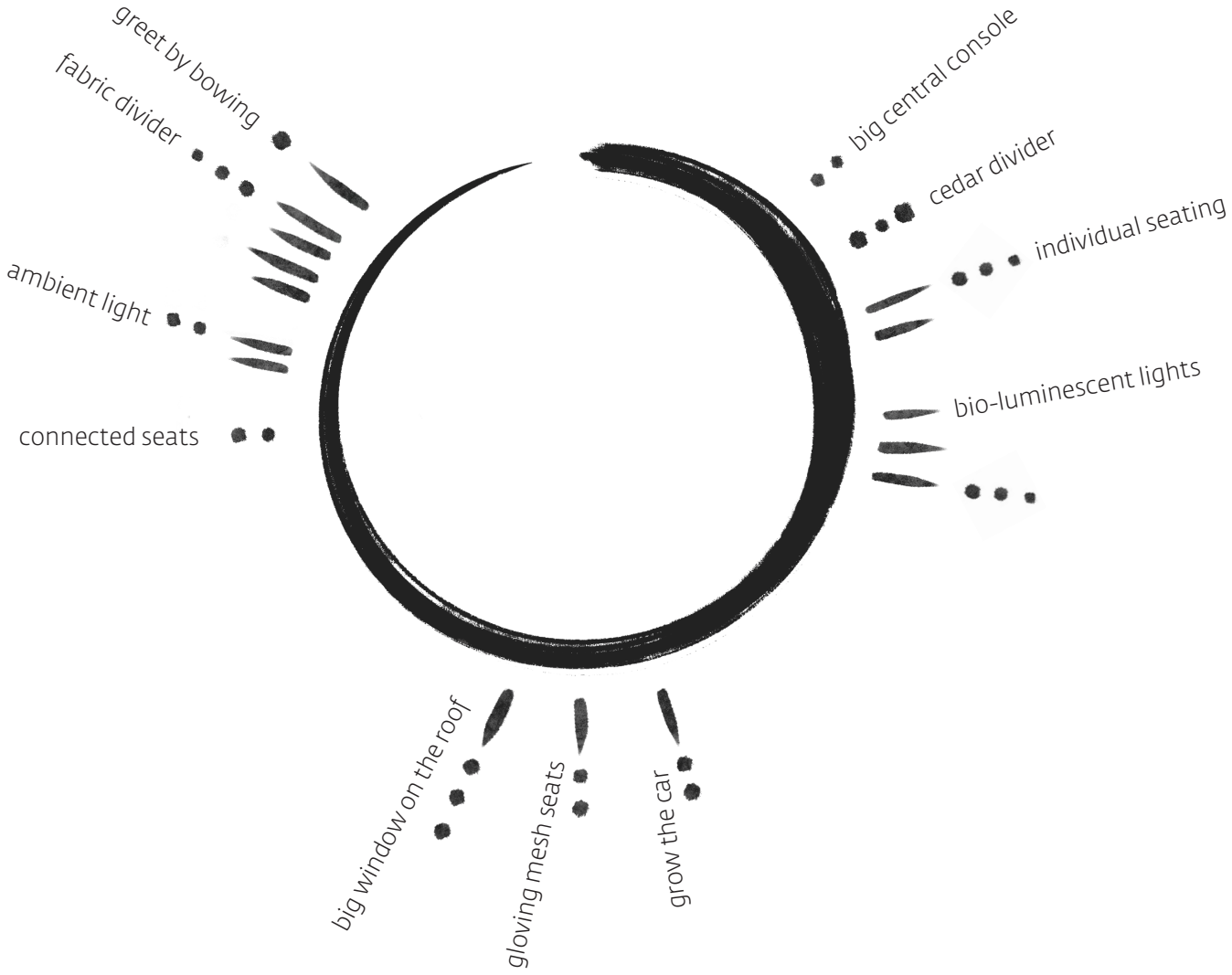
The seating element:
The most desirable concept idea concerning seating was taken from the third concept, the individual seating elements providing the personal space for a customer.

Additionally, during the follow-up interview, the participants elaborated on the proposition of the levels of autonomous driving, as well as openness to sharing a ride with other community members.

In general, the participants from the rural areas did not mind sharing a vehicle with other community members. The idea of privacy was found desirable, but not to the point of booking a ride for themselves only.

The proposed features of individual seating and big windows on the roof were recognised by both Mercedes-Benz representative group, as well as members of the rural community, as providing an interaction focusing on oneself. The participants recalled personal experiences of getting lost in their thoughts as moving images appear in the exterior.

At several points, the members pointed out a desire for driving, and uneasiness concerning the trust towards a fully autonomous vehicle. The active contribution of the residents in providing a service for the community in the form of driving was still considered an important quality.



Votes by Mercedes-Benz employees

Votes by participants from the rural areas of Japan

Figure 26.0 represents the visual outcome of desirable features.

Each feature is given a point by a community member and a Mercedes-Benz representative to assess its desirability for the final design.

Vision
Ikigai: a reason for being

The following chapters present the Vision 'Ikigai: A reason for being'.

Ikigai represents the Level 4 shared mobility service by Mercedes-Benz.

Its intention is to provide a holistic mobility concept, responding to the specific needs and opportunities within the rural areas of Japan.

A setting of fisherman's village Nori is devised as an idealistic representative of the developed vision.

In the future, people will resort to living in rural areas such as Nori, a small fisherman's village.

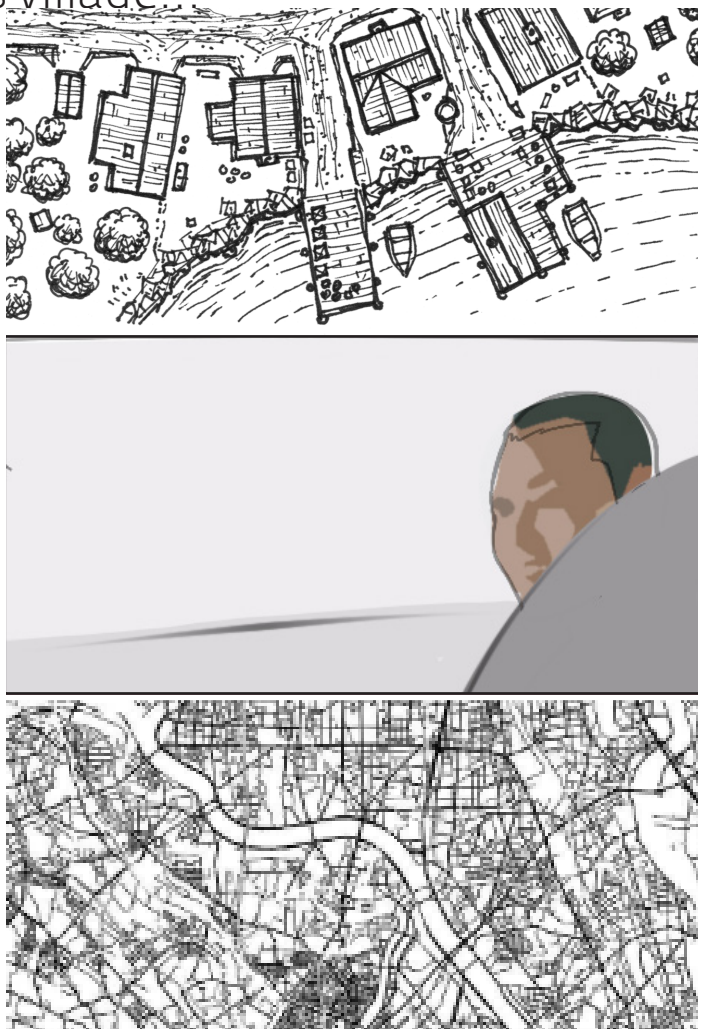


Figure 27.0, Elements of final design in context

A sustainable customer care

Seeking luxury of peacefulness and time, people segregate within the natural environment in small, yet self-reliant societies. The residents, making an active contribution in the community development and preservation of traditional values, are taking care of one another and representing the unique craftsmanship of the community through the use of the specially devised mobility service by Mercedes-Benz.

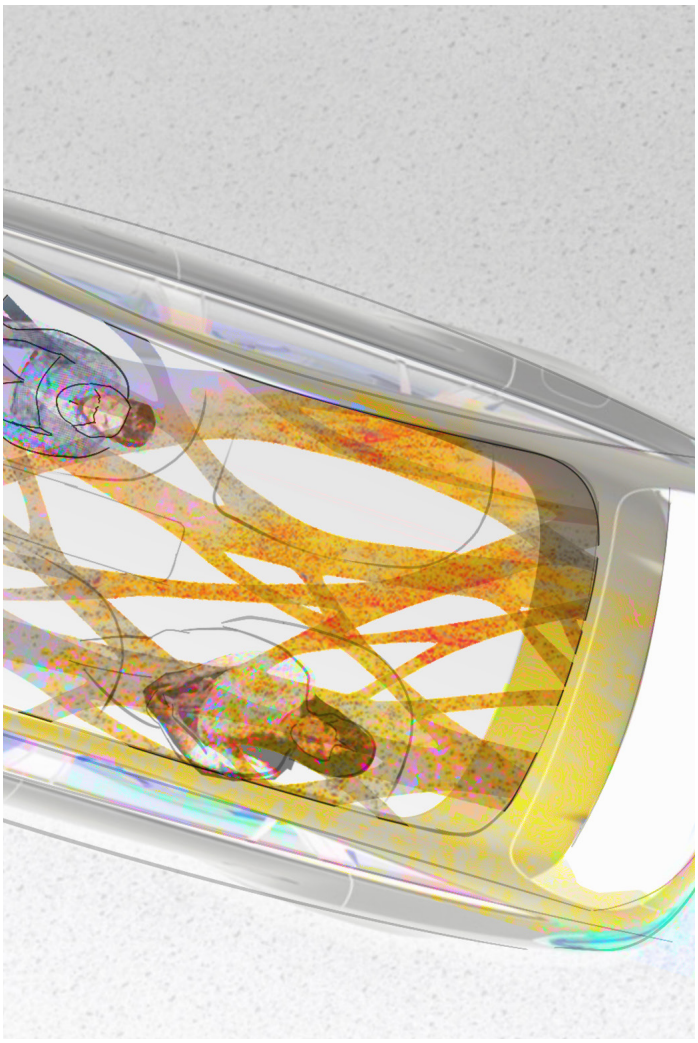
By observing mobility as part of Mercedes-Benz's holistic concept of 'Sustainable Luxury', a response to the environmental and societal needs of the customers arose. A Level 4 shared mobility service, intended for the rural areas of Japan, incorporates an efficient ride-sharing for dispersed and segregated societies.

The community involvement

The on-demand service, utilising the Mercedes-Benz municipal vehicle, grants community residents overcoming the dependence on the pre-scheduled, public transportation of the area. When leaving rural area, the service is accompanied by volunteer drivers seeking an active contribution. This is providing a sense of security and comfort to the customers interacting with the product.

Furthermore, the design implements the use of circulatory materials within the interior, thus providing for an efficient material application.

Based on the product demand and frequency of use, the design features are expected to change often. Representing a distinct potential within the replacement of the material features, the biodegradability supports nourishing the environment for the production of new material.



Car interior - a space on wheels

The interior design is explored as the development of space on wheels, rather than the development of 'a car'.

On one hand, the aesthetically minimalistic design features are envisioned to provide a customer with the seclusion and privacy in the shared environment. The individual seating with transparent, algae-based fabric divider provides the secluded, un-obstructive 'zones' within the interior. Consequently, supporting a comfortable, personal moment within a shared experience. Moreover, panoramic windows in the roof support the individual's focus on personal thoughts by getting lost in the moving images of the exterior. During the day, the pattern of lights in the roof window is creating a play of light and shade in the interior, whilst at night, the bio-luminescent lights are lit and flicker in response to the car's movement.

The uniqueness of the local area

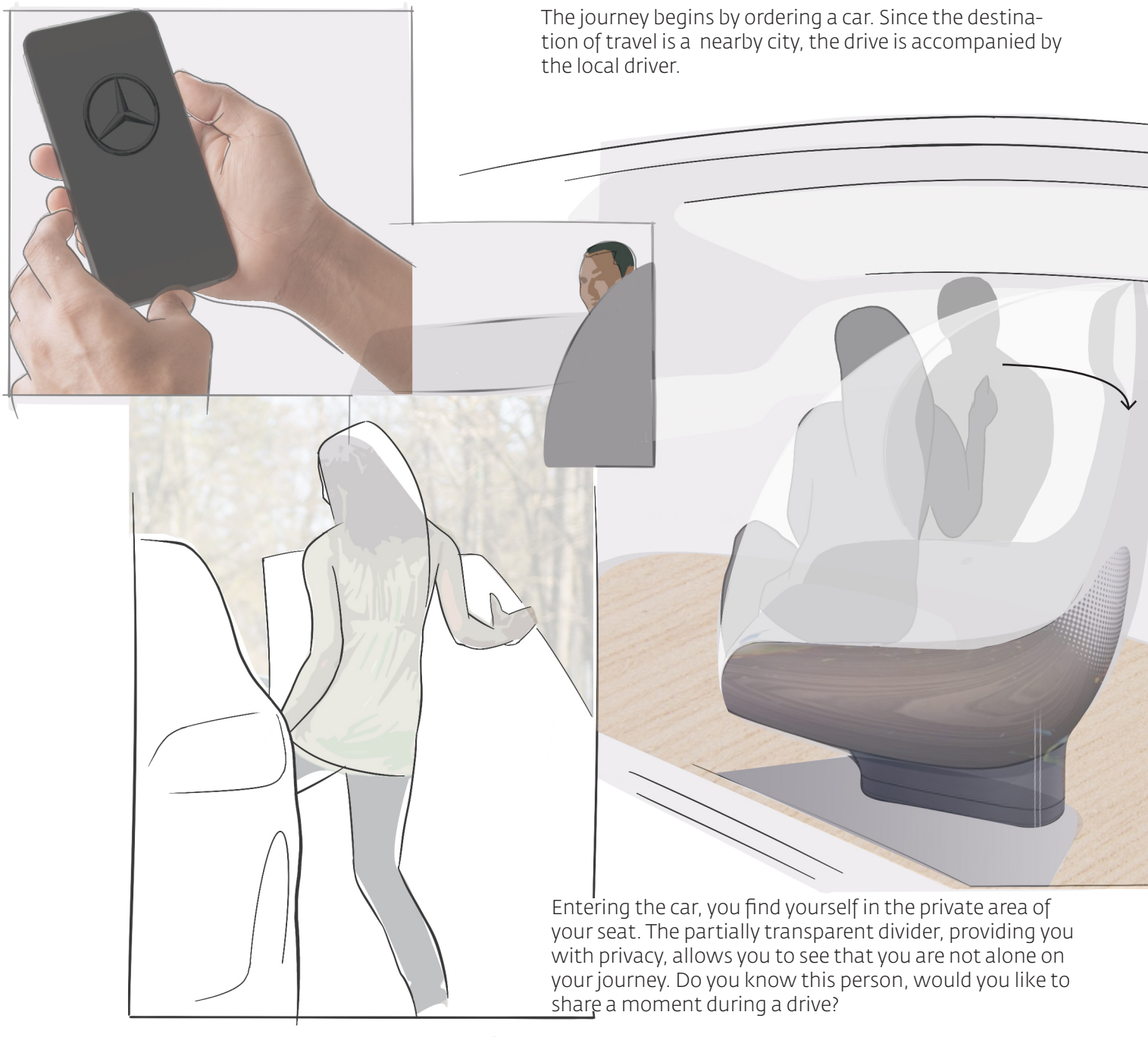
However, respectful to the customer's desires, the interior could act as a meeting point of the residents. Moving the algae-based fabric divider and enabling communication between passengers.

Ikigai's minimalistic interior is enriched by the works of local craftsman. The material finishings of unique algae-based materials and bio-luminescent lights, produced in the village, are limited to the vehicle design specific to the Nori's area.

Consequently, the car simultaneously represents exclusivity of the local craftsmen and uniqueness of the Nori's tradition, sharing them in rides beyond the borders of the village.

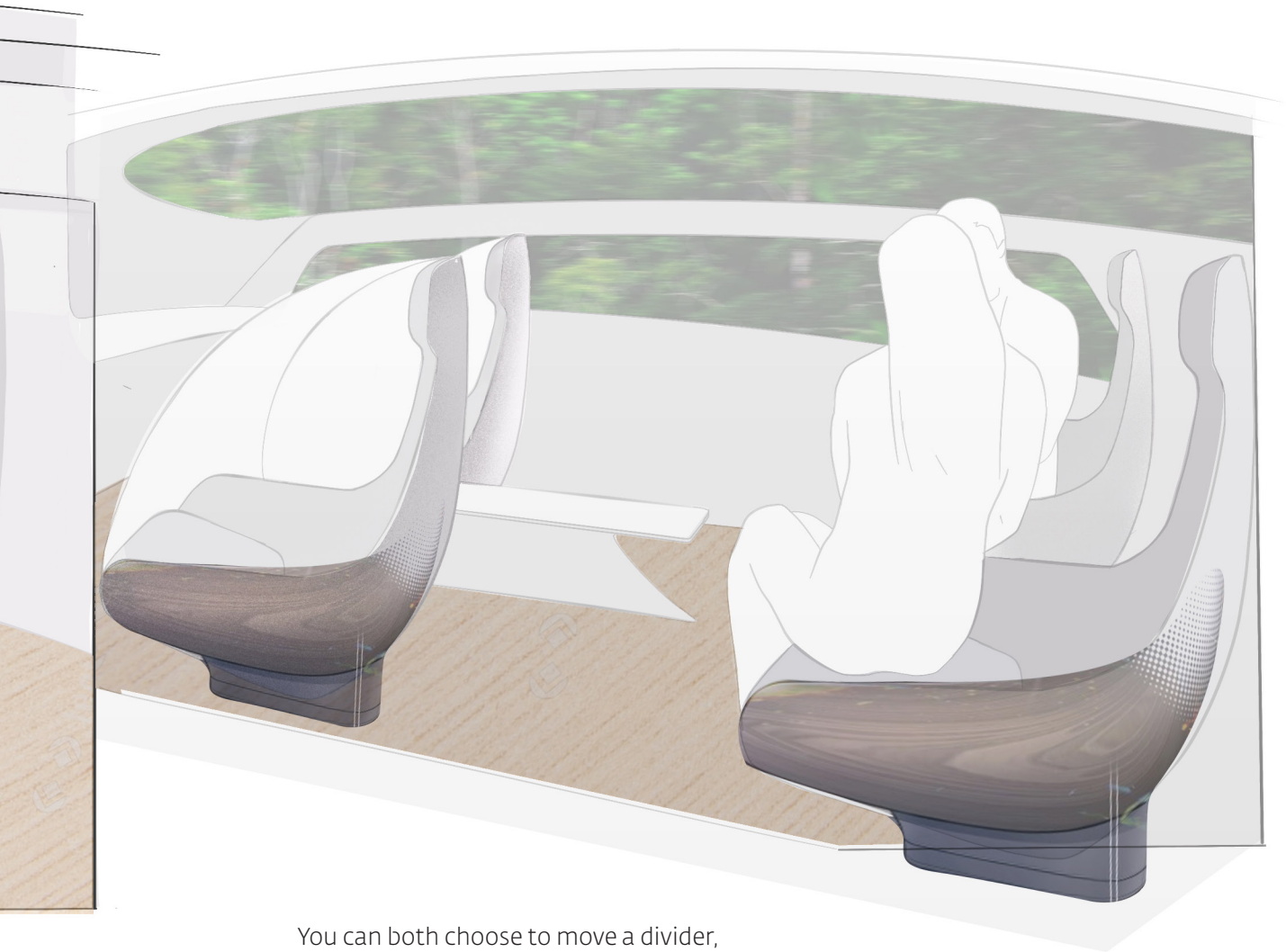
Storyboard

Figure 28.0, The storyboard depicts an individual situation of driving from the rural to the city area.

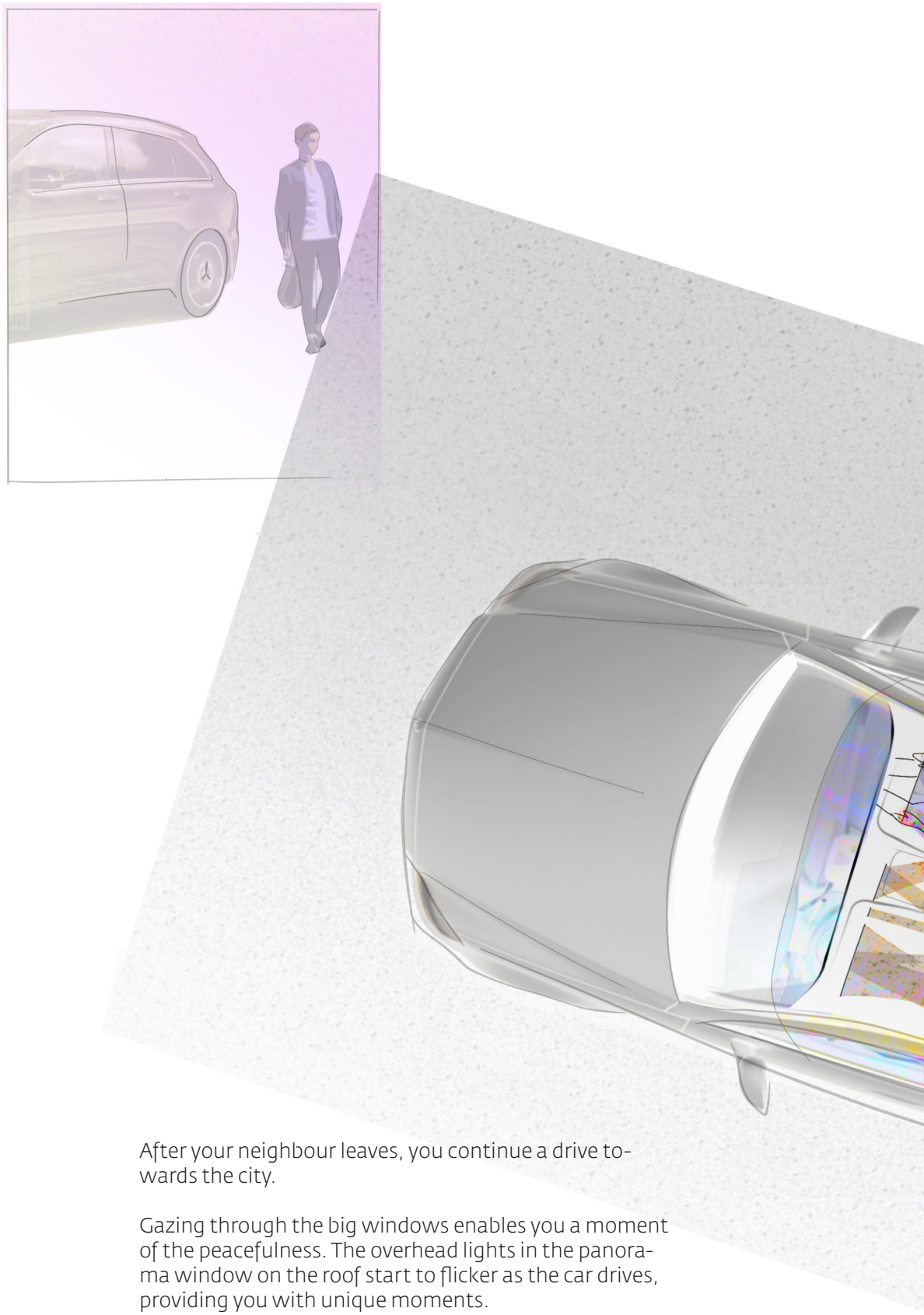


The journey begins by ordering a car. Since the destination of travel is a nearby city, the drive is accompanied by the local driver.

Entering the car, you find yourself in the private area of your seat. The partially transparent divider, providing you with privacy, allows you to see that you are not alone on your journey. Do you know this person, would you like to share a moment during a drive?

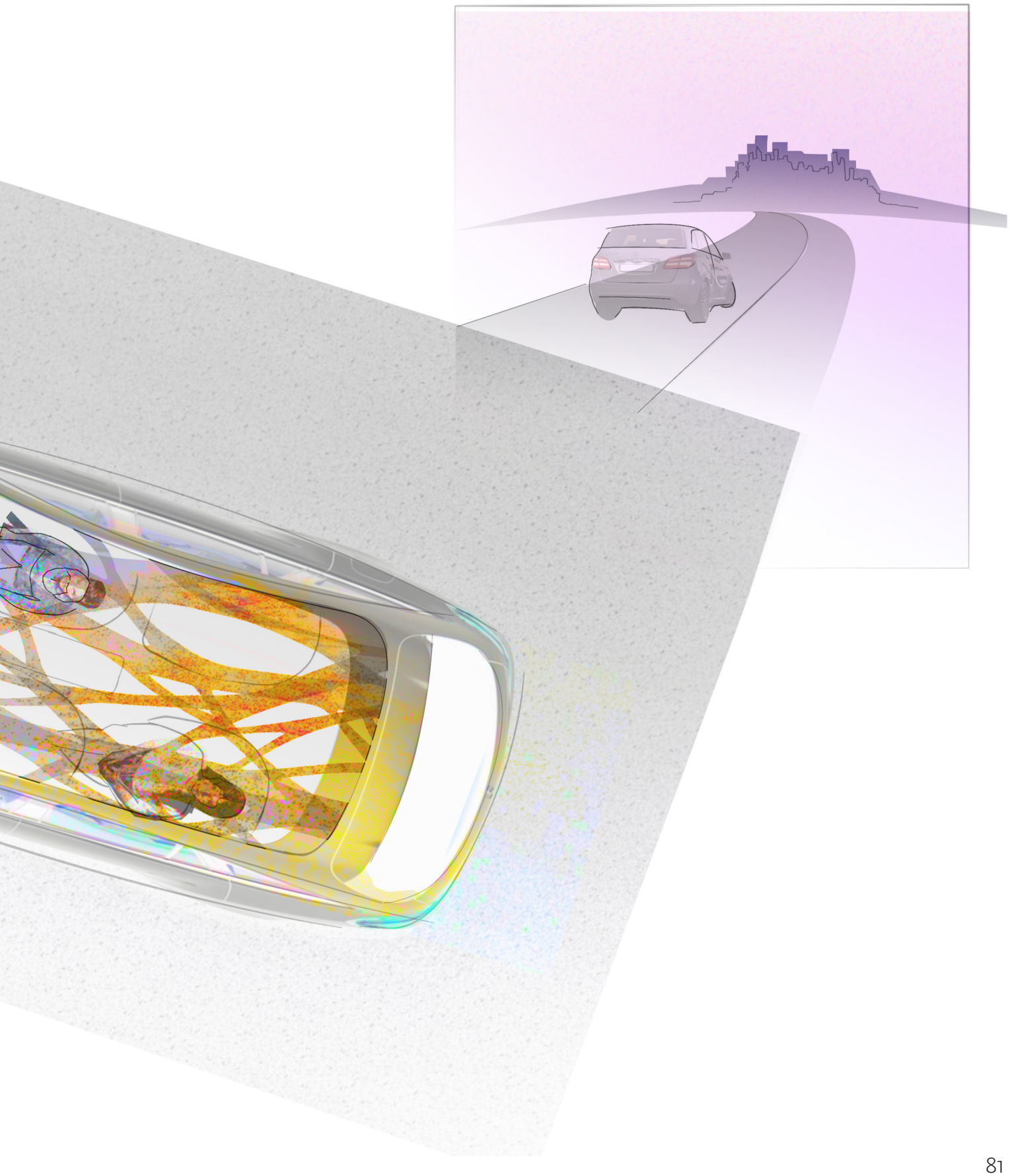


You can both choose to move a divider, sliding it back to the seat and giving you open space for a conversation.



After your neighbour leaves, you continue a drive towards the city.

Gazing through the big windows enables you a moment of the peacefulness. The overhead lights in the panorama window on the roof start to flicker as the car drives, providing you with unique moments.



As you reach the city area, the driver takes over, and soon you reach your destination.

Upon leaving, the seat dividers reset, giving new users a chance to choose whether they would like to enjoy their ride alone or shared with others.

Conclusion

The aim of this project was to contribute to the 'Sustainable Luxury' of Mercedes-Benz, within the novel context: one of the Japanese rural areas, as representative of the future societal needs, and with an answer to the possible future challenges and opportunities in terms of holistic mobility conceptualisation. The design opportunity was to provide a Mercedes-Benz with a vision for a holistic system of mobility, supporting the specific community needs at reconciliation of 'sustainability' and 'luxury'.

An analysis of the current state revealed that Mercedes-Benz expresses premium through high-quality material attributes, individualisation and customisation of Sensual Purity [30-33]. The relationship of the user with Mercedes-Benz is marked by obedience leading to the empowerment, reaffirming the owner's status within the social structures.

However, the future context implies a redefinition of luxury forms. The traditional luxury as an expression of personal status reduces before the uptake of the shared mobility services.

Additionally, the emergence of the segregated self-reliant communities open for innovation and ride-sharing implies a modesty in approach through respectful interaction within a shared interior setting. A desire for a minimalist environment, substituting material possessions for experiences, suggests a transformation towards a new idea of luxury.

Hence, the redefinition of luxury provided an opportunity for Mercedes-Benz to profile as a unique mobility provider at crossroads of values of the brand and the community.

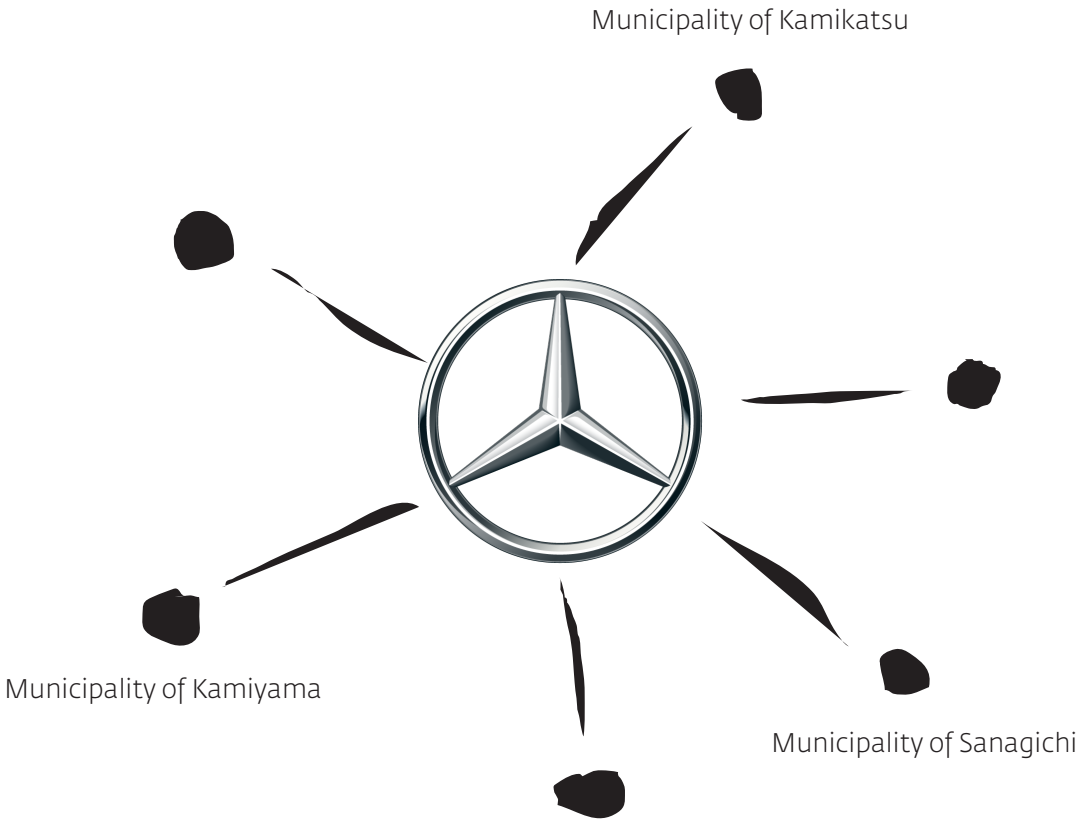
The mission statement elaborating the strive to accomplishing this opportunity was defined as desire 'to achieve a perception of an abundance of less within the experience and perception of the product while keeping the identity of the brand intact.'

The conclusive vision 'Ikigai: A reason for being' presents mobility solution as part of the holistic system of sustainability, and manifests as a contribution to the domain.

The vision 'Ikigai' is a Level 4 shared mobility service by Mercedes-Benz, intended for the rural communities of Japan. Based on the aspect of an active contribution from the members of the self-reliant communities, the brand is employing the volunteer drivers to monitor the vehicle and provide a sense of security and comfort to the passengers. In addition, individual attributes of the community's craftsmanship and tradition are represented within the minimalistic interior elements, featuring an expression of the community's uniqueness.

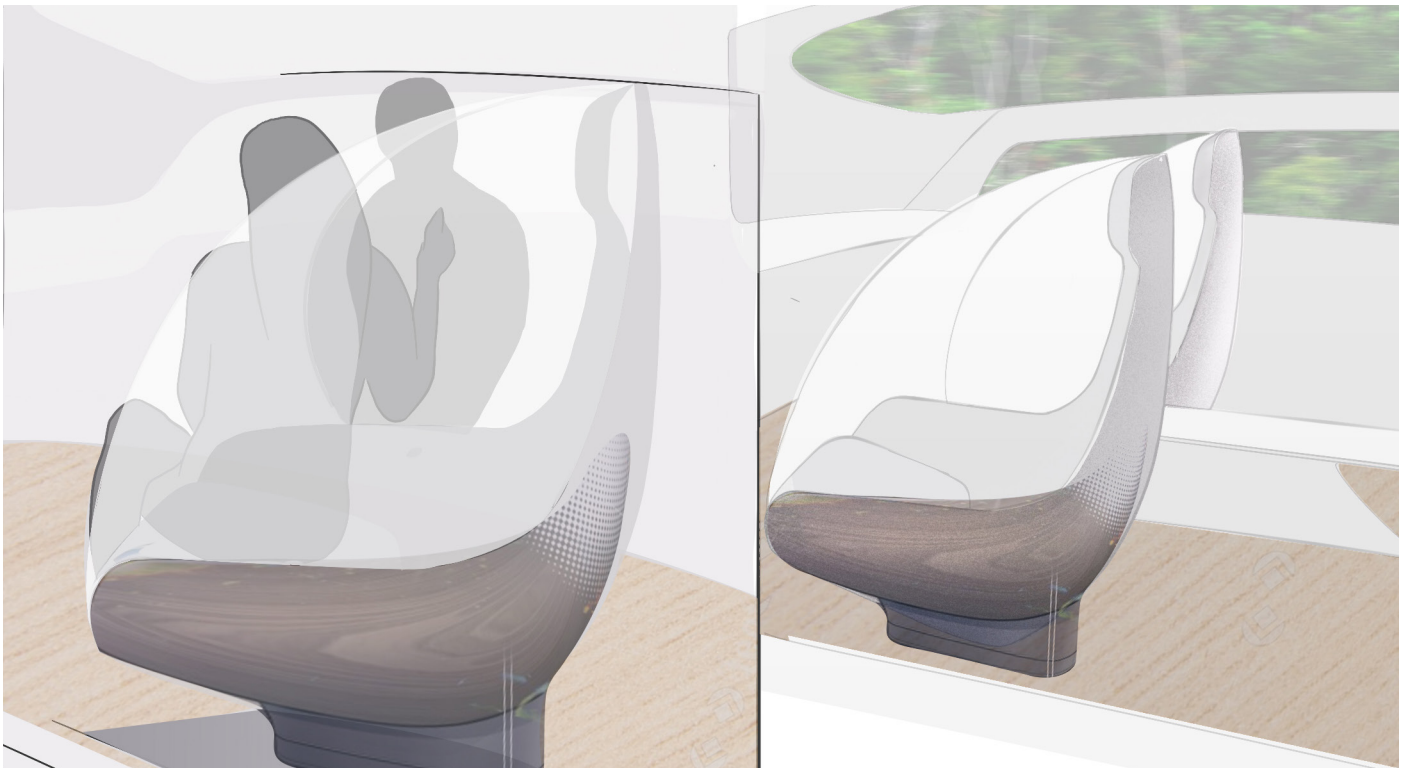
The relation to the mission statement, as well as the contributions of the vision, are further covered in the Chapter 'Relationship to mission'.

Figure 29.0, Users of future Mercedes-Benz mobility services



Relationship to mission
through interaction qualities

Figure 30.0, Visons's relationship to mission

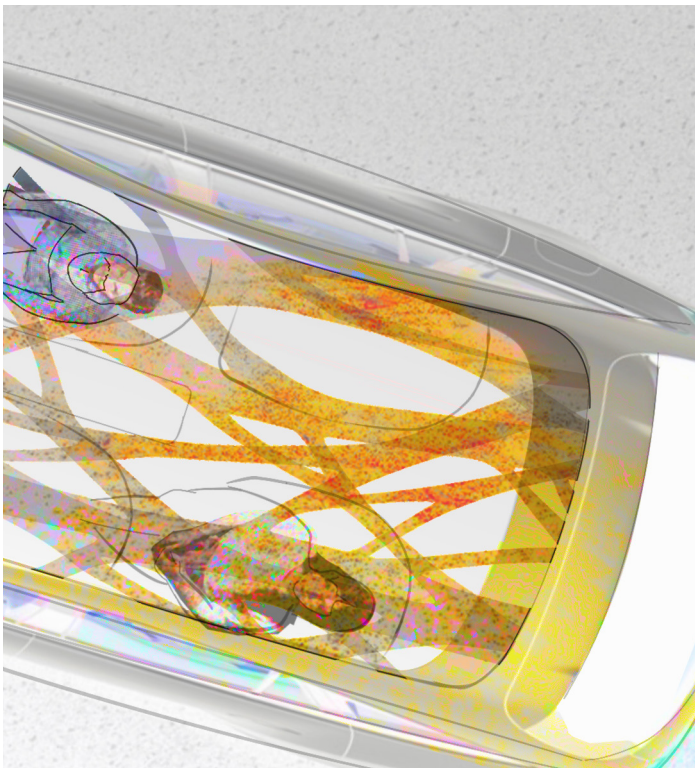


Experiential abundance of less

Un-obstructive moments within the interior provide an individual focus and indirect interaction. User's decision, to remove the division from only their seat, creates interaction independent of other passengers, thus preserving their respect for privacy.

Physical abundance of less

The perception of the product remains minimal and open, with all elements not used at the moment subtly refined to provide minimal physical appearance.



Preserving the brand identity

The brand remains to provide unique personal experiences within innovative products. Meticulous attention to details and high build quality bring it to the class of its own in providing a sense of safety and physical ease leading to Mercedes-Benz comfort.

Contributions of the vision to Mercedes-Benz and rural areas of Japan

'Ikigai: A reason for being' is a vision of a future mobility service. It provides an idea for the expression of premium in the future context incorporating an increase of shared products.

Technological advancements and segregated communities

Mercedes-Benz as an innovation-oriented engineering company developed technological solutions supporting autonomous driving on various levels.

An opportunity for meaningful implementation of these advancements lies in the future, where people seek the luxury of segregation within natural environments.

To provide customers with an efficient solution, a holistic on-demand approach to societal and environmental needs arose. The supporting Level 4 technology provides the residents with independent mobility service for dispersed and segregated rural areas. However, for consumers, seeking an active contribution to the community, Ikigai provides an opportunity to find purpose as volunteer drivers. Subsequently, this results in an enhanced sense of security and comfort among passengers.

The luxury in sharing

In the future, as people are being part of smaller communities, the premium is no longer expressed through individual status. Instead, the idea of shared ownership rises, consequently changing the relationship towards the form of luxury.

The main idea of Ikigai vision is to provide customers with a sense premium within a shared environment.

Ikigai's response to the matter is twofold.
On one level, the concept provides a sense of privacy and comfort by the implementation of individual seating with biodegradable fabric dividers. The features are providing secluded, un-obstructive zones within the interior, enabling the customers a luxury of time to focus on personal thoughts and feelings.

On another level, Ikigai's minimalistic interior is enriched by the works of local craftsman. The unique material finishings produced within the community, are limited to the vehicle design specific to the area. Therefore, the car of a specific municipality represents the uniqueness of individual localities and shares them in the rides beyond the area borders.

In this way, Mercedes-Benz as a brand would develop the production of numerous custom made vehicles, supportive of local traditions and crafts. Consequently, the heritage of the brand would be enriched by individual area attributes.

Further recommendations

Car development is a complex process employing numerous experts from various fields. In order to develop a successful product, a corporation such as Daimler is required to approach mobility domain by tackling future challenges in a strategic manner. To remain a leading premium brand, Mercedes-Benz should strive to follow a specific company vision, instead of aiming to satisfy every market niche.

The current corporate structure of Mercedes-Benz remains a complex set of individual sectors with individual goals. Company's numerous departments are developing a vast number of future-oriented ideas in specific sectors, respectful of their technical and experiential function. This aspect of corporate culture provides a competitive atmosphere, as each department aims to develop an innovative idea with its expertise having a specific role in the main focus.

However, to engineer a design for the future, it is no longer enough to develop individual solutions.

Accustomed to the vast progress, as a society, the complexities of our future will require continuous improvement. Therefore, the upcoming developments in the field would require the company to approach mobility as a whole, implementing a holistic approach. The hierarchical corporate structure would benefit the interdisciplinary strategy following specific company visions, instead of focusing on a multitude of goals aiming to satisfy every individual sector.

Besides, to better respond to the underlying mobility needs and desires of a customer, in the future the application of co-creative methods engaging a user in the process is advisable.

Therefore, the Ikigai Vision was designed with an effort to implement the beforementioned suggestions. The vision implemented the novel material use to the interior supportive of psychological human needs.

Although at times the vision is relying on the scopes greater than the current influences of car design, like stages of material development progress, certain aspects are translatable to interior development of the future.

The relationship between the product and the customer, providing the comfort of private zones within a shared interior, is an aspect applicable to the practices of shared mobility services in the development.

c: Appendix

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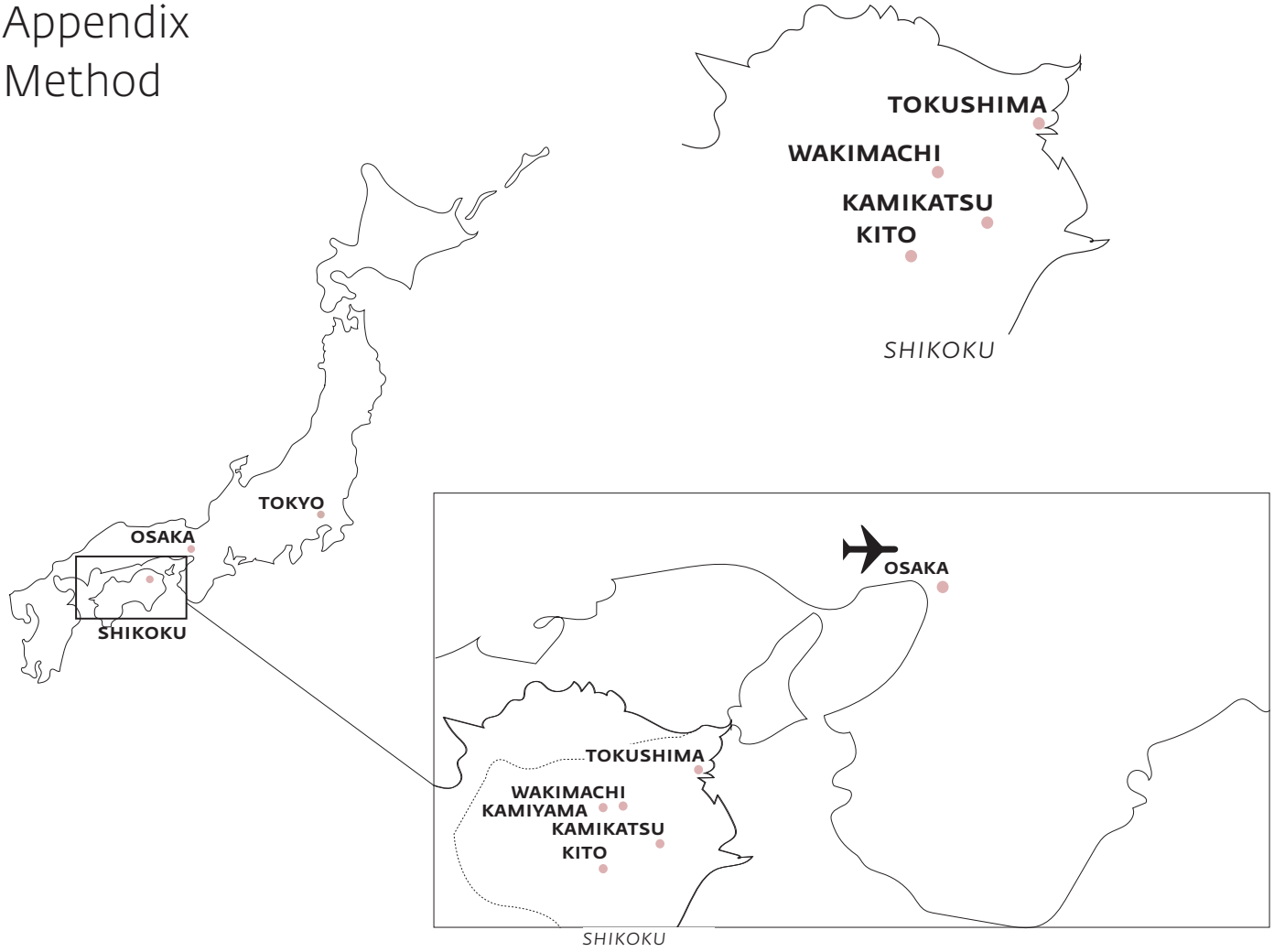
Appendix
Method



Thefield research incorporated the exploration of the Shikoku area.

In terms of this project, the methods empolyed to understand nuances of self-reliant communities are explored. As relevant in elaborating the identified community needs and influences of traditional values in the contemporary community governance.

The examples are given
The explored villages of Kamikatsu, Kamiyama, Sanagochi, Mima, and Kito.In terms of this project, three examples of before-mentioned communities are given, as relevant in elaborating the influences of community impacts and Shinto, a native religion originating in Japan.

KITO
car

observations
informal interview

KAMIKATSU
bus

observations
questionnaires
interviews

WAKIMACHI/MIMA
train/by foot

observations
informal interview

TOKUSHIMA

observations
questionnaires
interviews
interviews w/ students

Shikoku (四国, literally "four provinces") is one of the five main islands of Japan. It is famous for its 88-temple pilgrimage, consisting of Buddhist and Shinto temples. (Ref FIXME) Although as a society, not considered very religious, Japan is traditionally influenced by many aspects of its native religion. Developed from the close relationship with nature, Shinto as polytheistic religion revolves around the kami (jap., divine beings), supernatural entities believed to inhabit all things. (REF, REF FIXME) Considering every part of nature as a representation of the divine spirits, the Shinto teaches respect towards nature and life.

The forms of respect towards nature and communities were identified in the contemporary strives of the following three areas:

Kamikatsu
population: 1526
Known as a zero-waste town, due to the local efforts, Kamikatsu was able to provide itself with the local zero-waste station. The town is world-known by its efforts in environmental sustainability (REF). The community is running the 'Kurkuru shop' consisting of the new products made of recycled materials. Moreover, the people within the Kamikatsu community are not only aiming to recycle the waste, but also reduce it by use of biodegradable materials.

Kamiyama
population: 4724
The community of Kamiyama created a Green Valley, an organization aiming to attract the younger generations weary of the big-city life. The organization is hosting the 'Artist in Residence' program, along with support for tech start-ups, and was able to provide the town with the positive trend of people migrating back.

Sanagochi
population: 2106
Sanagochi village is organizing in a traditional community structure specific to Japan. Jokai (the structure), developed as a support system within the communities. It is functioning as a trusting network between several 'Koju', a traditional mutual aid bodies, specific to Sanagochi. The roots of Jokai and Koju are connected with the traditions of Shinto, providing temples with mutual aid.

Some of the accomplishments of the structure included the river cleaning and road protection association. The Sanagochi village is also running the local magazine, written by the community residents.

Appendix
Research Materials

Questions related to the mobility needs of the rural areas
(English)

1. (In the area where you live) Do you think transportation is important?
2. How often you rely on transportation in your area?
   Always > Never
3. Do you own a personal vehicle, e.g., a car?
4. If you are using a personal vehicle, such as a car, who drives it?
   Me - Someone else
5. When using a personal vehicle (e.g., a car), how often you share a ride with someone else?
6. If you are sharing a ride with someone, could you kindly recall some reasons for sharing a ride?
7. If you are sharing a ride with someone, do you usually know this person?
8. If you know the people you are sharing a ride with, which relation do you have with them?
   Family / Friend / Neighbour / Acquaintance / Other
9. When using a personal vehicle, which of these interior aspects you pay the most attention to?
   Entertainment / Smell / Sound / Comfort / Height of the vehicle interior / Interor materials /
   Temperature / Practicality of use / Sustainability of materials / Light
   Number of compartments, e.g., storage / Level of customisation and details, such as: / Something else:
10. Do you think personal vehicle use could be improved?
11. Think back to a situation of using a personal vehicle. Do you think the use in the future might change? Please imagine how it could be improved in the future in your opinion.

12. How often do you use public transport?
13. Which means of the public transport you use most often?
14. How satisfied are you with public transportation in the area?
   Extremely satisfied > Dissatisfied
15. When using public transport, which of these interior aspects you pay the most attention to?
Entertainment / Smell / Sound / Comfort / Height of the vehicle interior / Interor materials /
   Temperature / Practicality of use / Sustainability of materials / Light
   Number of compartments, e.g., storage / Level of customisation and details, such as: / Something else:
16. Do you think public transportation could be improved?
17. Think back to a situation of using public transport. Do you think the use in the future might change? Please imagine how it could be improved in the future in your opinion.
18. When using personal or public transportation which places are most important for you to reach? (e.g., work, hospital, community center, relatives, etc.) Kindly, give examples:

19. Do you think there is something important related to transportation in the area, that was left out? If yes, kindly give an example:
Thank you very much for your time and efforts!

アンケット

イントロダクション

ご参加の皆様へ
皆様にはという調査へのご参加をお願いしております。この調査はデルフト工科大学工業デザインエンジニアリング学部(オランダ)に卒業生する Zoricic Jasna が実施するものです。
＊最初のページでは参加者の権利、データの利用、手順について解説しています。
調査への参加者には参加者の権利ならびにデータの利用に関する情報が与えられます。
アンケートへは匿名です。
アンケートへの回答所要時間は約5～10分程度です。
この調査への参加は完全なる任意で、どの段階であっても参加を取りやめることができます。質問への回答を控えることも可能で、調査に参加しないという自由もあります。
私たちは、この調査にともなう明白なリスクはないものと信じています。皆様の回答が外部に公表されないよう最大限の努力を尽くすほか、個人情報が報告書や発行物に使われることは一切ありません。いかなるリスクをも軽減させるため、データは分析を行う学生リサーチャーにのみ公開し。質問を通じて皆様をテストするものではありません。回答に正誤はありません。健闘を祈ります、そしてありがとうございます！☺

	質問	答え
(1)	(お住まいの地域で）交通手段は重要だと思いますか？	☐ はい　☐ いいえ
(2)	お住まいの地域ではどのくらいの頻度で交通手段を利用しますか？(車など)	いつも利用する ☐　かなり頻繁に利用する ☐　頻繁に利用する ☐　ときどき利用する ☐　滅多に利用しない ☐　全く利用しない ☐
(3)	自家用車（例：車）は所有していますか？	☐ はい　☐ いいえ
(4)	車などの自家用車を所有している場合、運転をするのはどなたですか？	☐ 自分　☐ 自分以外の誰か
(5)	自家用車（車など）を利用する際、どのくらいの頻度で他の人を乗せることがありますか？	いつも利用する ☐　かなり頻繁に利用する ☐　頻繁に利用する ☐　ときどき利用する ☐　滅多に利用しない ☐　全く利用しない ☐
(6)	他の人を乗せると答えた方、その理由を教えていただけますか？	
(7)	知っている方を乗せると答えた方、その方とはどのような関係ですか？	家族 ☐　友人 ☐　近所の人 ☐　知人 ☐
		☐ その他（詳しく：　　）

質問	答え

(8) 自家用車を利用する際、車内で最も気になるのは次のうちどれですか？

- ☐ エンターテイメント
- ☐ 匂い
- ☐ 音響
- ☐ 快適さ
- ☐ 室内高
- ☐ 内装の素材
- ☐ 室温
- ☐ 実用性
- ☐ 素材の持続可能性
- ☐ 照明
- ☐ 収納ボックスの数（例：物入れ）
- ☐ 収納ボックスの数（例：物入れ）
- ☐ カスタマイズの程度と細かい部分（詳しく：　　）
- ☐ それ以外（詳しく：　　）

(9) 自家用車の利用に改良の余地はあると思いますか？

☐ はい　☐ いいえ

(10) 自家用車を利用する際に,車内における変化はあるて思いますか? ある場合,車内はどのように改良されると思いますか？

(11) どのくらいの頻度で公共交通機関を利用しますか？

いつも利用する	かなり頻繁に利用する	頻繁に利用する	ときどき利用する	滅多に利用しない	全く利用しない
☐	☐	☐	☐	☐	☐

(12) 最もよく利用する公共交通機関は何ですか？

☐ バス　☐ タクシー

(13) お住まいの地域の公共交通機関にどのくらい満足していますか？

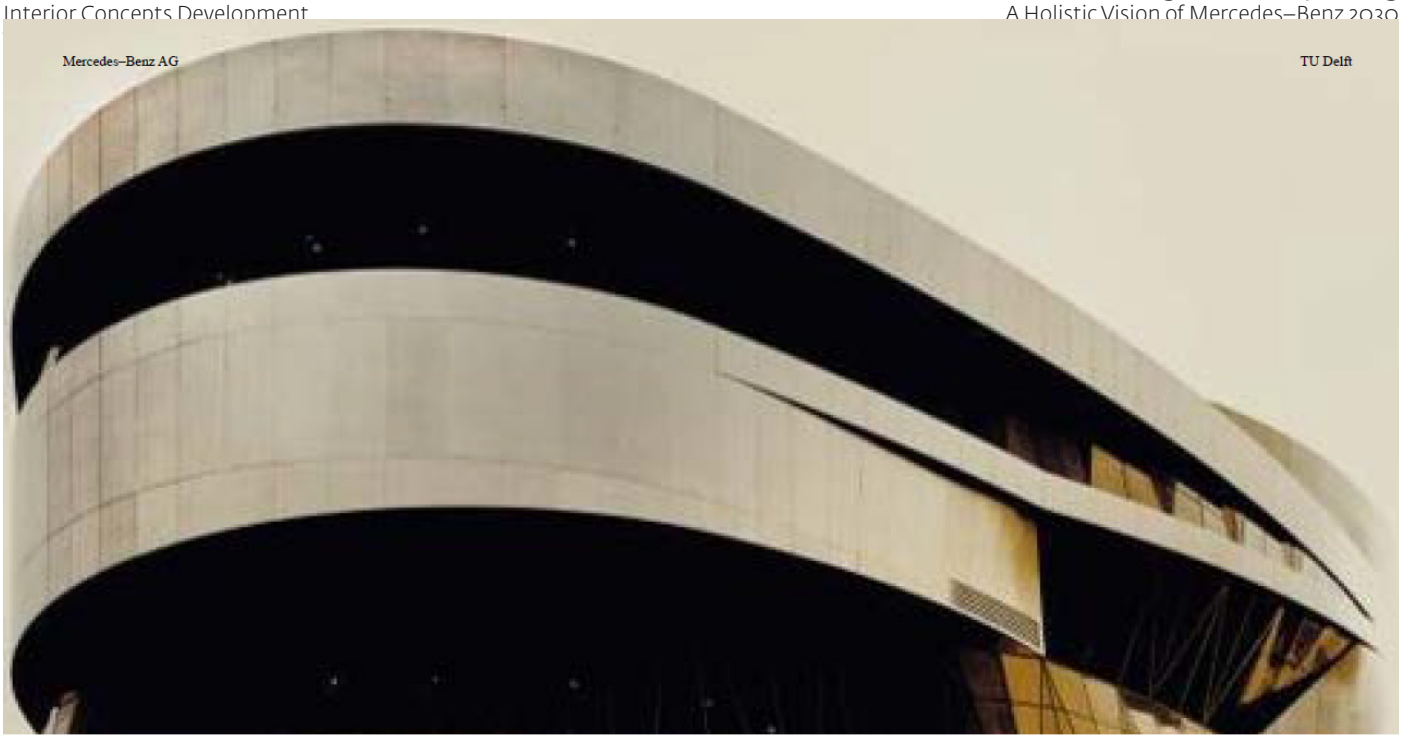
- ☐ 大いに満足している
- ☐ とても満足している
- ☐ 満足している
- ☐ ある程度満足している
- ☐ 満足していない
- ☐ 不満

Consent Form
[please fill the gap and select the appropriate boxes]

Taking part in the study

I have read and understood the study information dated _____, or it has been read to me. 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 the study may involve audio or video recorded interviews, a survey questionnaire, and note-taking; and that data will be destroyed after processing and anonymisation.

Use of the information in the study
I understand that the information I provide will be used for the researcher's understanding of the brand and analyses, which after processing (anonymisation into quantitative or qualitative data) might be presented as part of the study material (research report).
I understand that personal information collected about me that can identify me, such as [e.g. my name or where I live], will not be shared.
I agree that my (non-personal) information can be quoted in research outputs.
Future use and reuse of the information by others
I understand that upon the analysis and processing of the data into anonymous qualitative/quantitative data, the raw data provided from the study will be destroyed (deleted, anonymised and thrown away). None of the raw data formats will be commercialised or re-used in further research studies.



ブランドリサーチ

Mercedes–Benz AG
TU Delft

イントロダクション

ご参加の皆様 へ
皆様には「移動時の車内での体験：Mercedes-Benz 2030の全体的なビジョン」という調査へのご参加をお願いしております。この調査は、Mercedes-Benz研究開発部の協力のもと、デルフト工科大学工業デザインエンジニアリング学部に所属するZoricic Jasnaが実施するものです。

※ 最初の2ページでは参加者の権利、データの利用、手順について解説しています。

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この調査はMercedes-Benzに対するブランドイメージをより深く理解することを目的としており、アンケートへの回答所要時間は約15分程度です。アンケートにお答えいただいた後、回答内容に関してリサーチャーによる20分～30分間のインタビューがあります。調査は録音／録画される場合があります。インタビュー中にはメモの記述を行います。

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手順

次のアンケートは小冊子のようにご覧いただけるようにデザインされています。簡単な質問のページが何枚か続きますが、どの質問もその回答所要時間は数分以内です。それぞれの質問に手順と解答例が記されています。これらの質問はブランドイメージのとらえられ方をより良く理解することを目的にしています。回答に正誤はありません。質問を通じて皆様をテストするものではありません。

健闘を祈ります！☺

その他のご不明な点

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同意書

※【行間を埋め、当てはまるボックスに印をつけてください】

調査に参加する	はい	いいえ
(date) 私は、＿＿＿＿日付けの調査に関する概要を読み、理解しました。（または、読み上げてもらいました。）私は、この調査に関して質問を行い、その質問に関して満足する回答を受け取りました。	☐	☐
私は、この調査に参加することに任意のもと同意します。私は、質問への回答を控えられること、調査のどの段階においても理由を告げることなく調査への参加を取りやめられることを理解しています。	☐	☐
私は、調査にはインタビューの録音／録画、アンケート、メモの記述が含まれること、そしてそれらのデータは加工および匿名化された後に破棄されることを理解しています。	☐	☐
調査における情報の利用		
私は、こちらが提供する情報がリサーチャーのブランド理解ならびに分析に利用されること、そしてそれらの情報が加工されたうえで（量的および質的データへの匿名化）研究資料（調査報告書）の一部として公表されることを理解しています。	☐	☐
私は、収集された私に関する個人情報のうち、個人が特定できるもの（例：氏名や居住地）は公開されないことを理解しています。	☐	☐
私は、私の（個人情報ではない）情報が調査報告に引用されることに同意します。	☐	☐
他者による情報の将来的な利用、再利用		
私は、調査を通じて収集された未加工データは分析、ならびに質的／量的データに匿名化された後に破棄（削除、匿名化したうえで廃棄）されることを理解しています。未加工データが商用化、今後の調査研究に再利用されることは一切ありません。	☐	☐

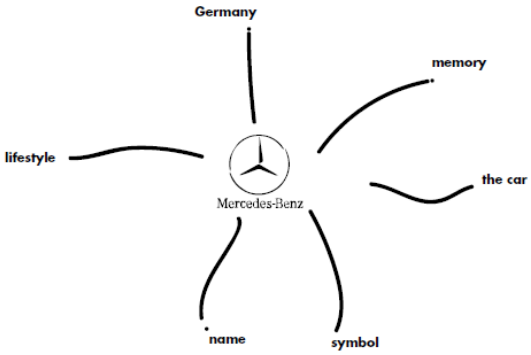
（署名） （名前）
署名または名前

(or) Jasna Zoricic
署名または名前

Mercedes–Benz AG TU Delft

Please write all the associations you have to the Brand of Mercedes-Benz. The associations can work like a mind-map of the words, images, experiences and lifestyles you think of when you hear the name Mercedes-Benz.

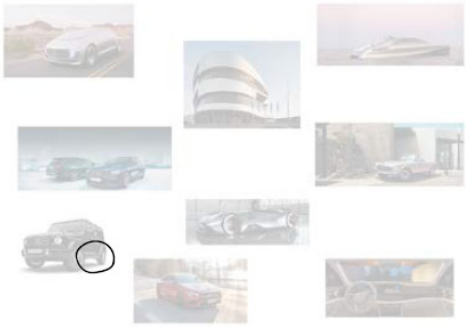
Use the next page to write the words that come to your mind. (Number of words doesn't matter.)



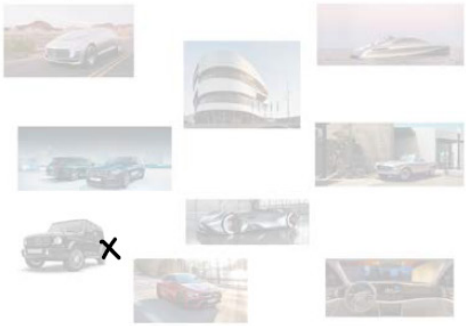
01

ブランドの連想（アソシエーション）/
Brand associations

'Positive' symbol



'Negative' symbol



All of the images shown in the collages on the next page are products of Mercedes-Benz.

Please indicate the images you most strongly connect to the Brand with one of the 'positive' symbols. Also, please indicate the ones you strongly don't connect to the Brand with one of the 'negative' symbols.

02

ブランドイメージ /
Brand image

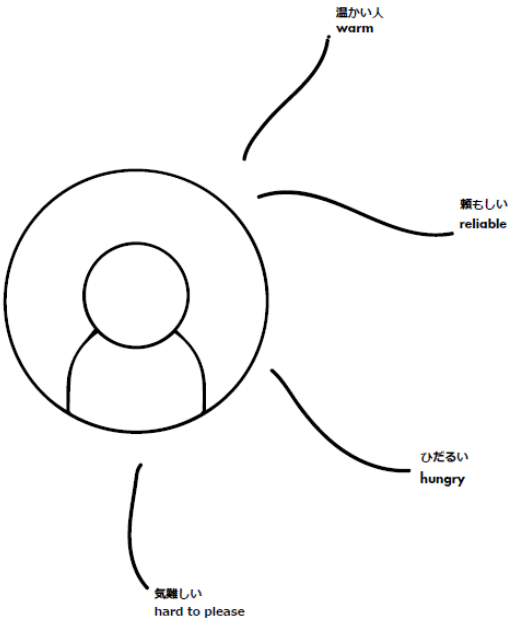
03

メルセデスベンツが人なら...？/
If Mercedes-Benz was a person...?

Imagine Mercedes is a person. What sort of person would he/she be? Is he reliable? Does she always seem elegant? Would you be best friends, or would they be an aquaitance?

What sort of a relationship you think you would have with this person? What sort of qualities does this person posses (both positive and negative)? Write these qualities, and add/send me a picture of a person/ character if you want.

(Additional help; think back of situations when you were in contact or had any experience, interaction with Mercedes; what did you think, how you felt?)



Self-governing

Subjective views of the person responsible

- Self-governing: To govern oneself

Determine investment, systems and rules to improve the future of the community with community residents, including oneself. Also add on new value to adapt to the changing age.

- Self-governing: Be governed by oneself

Actively invest and follow systems and rules decided by the community, including oneself. Also add on new value to adapt to the changing age.

- Self-governing: To govern proactively

The unchanging providence inherent to the community possessed by and handed down among people who live in the community matures and intuitively adjusts people's way of thinking to nurture the relationship between human and nature.

- Self-governing: Be governed proactively

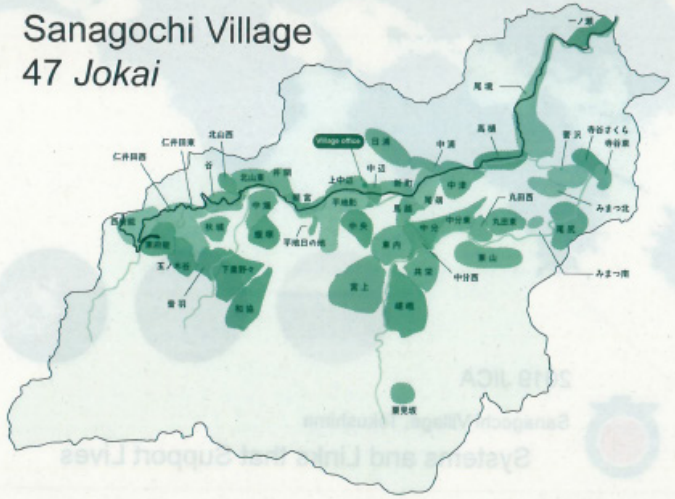
When an issue arises in a self-governing community, it is naturally resolved by systems, rules and the unchanging providence inherent to the community.

Community Development

A process of internally creating and adding on new value suitable to the community of the day

Toshimichi Miyaguchi, Professor, Waseda University

Sanagochi Village
47 *Jokai*



Sanagochi Village

(Ogt. 31, 2019)

Existed as a village for nearly 1,000 years

- Area : 42.28 ㎢
- Population : 2,309
- Rate of aging : 45.4%
- Specialty : Citrus *sudachi*, green onion, *shiitake* mushroom
- Brand products : Sakura Momo Ichigo(strawberry), kiwi fruits, etc.

Sanagochi Village

Management of *Ko* (Group)

- Chairperson(Requirements, selection method, term, etc.)
  Change every year. Members take turns.
- Support members(Accountant, etc.)
  Change every year. Members take turns.
- Decision making (regular meetings, frequency, etc.)
  Annual meeting but frequency varies by *Ko*.
- Agenda (10 years ago and today)
  Almost no change in agenda

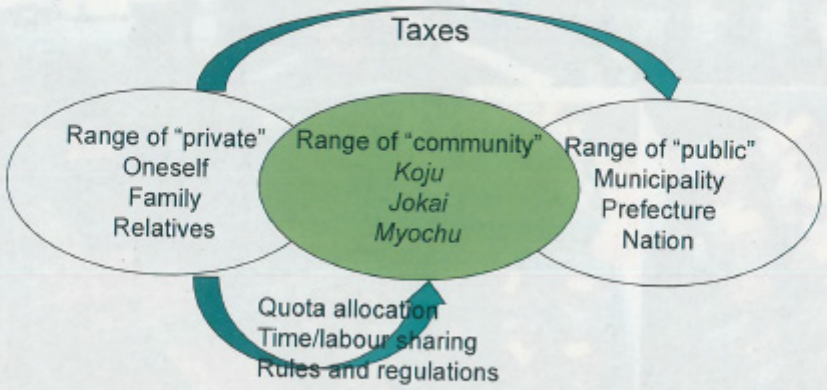
Unique Community Organizations of Sanagochi Village

- History of Sanagochi Village
- What is *Koju*?
- What is *Jokai*?
- What is *Myochu*?

Tanomoshi Ko (Mutual financing group)

- Related to savings and helping farmers. Organized group of sympathetic people to provide aid to farmers affected by crop failure, illness or other emergencies.
- In the past, it was known as the only "social financing system" in operation and made significant contributions.
- In developing countries, community residents help one another in the form of mutual aid like this. (Microcredit, etc.)

Autonomous Community Groups in the Village



What is *Jokai*?

- This started as a five-person group during the Edo period, and began as an organization for friendship and mutual assistance to enhance links in the community.
- In 1939, Jokai was established by leaders of the village at the time, as a group playing a huge role in tax payments and improvement of self-governing. Jokai later become autonomous organizations.

Achievements of *Jokai*

- This unique community organization prevents rarefaction of links of community members. It maintains the social order of the community and exhibits various effects.
- River cleaning campaign (every April)
- Road maintenance (every August)
- Garbage separation activities (voluntarily separating garbage into 33 categories)

Management of *Jokai*

- Chairperson(Requirements, selection method, term, etc.)
  Change every year. Members take turns.
- Support members (Accountant, etc.)
  Change every year. Members take turns.
- Decision making (regular meetings, frequency, etc.)
  Once per month. Road and river cleaning operations held twice per year.
- Agenda (10 years ago and today)
  Almost no change in agenda

Mutual Aid by Saga *Myochu*

Old customs remaining to date
- Collection of rice by the volunteer fire brigade

When a house is caught fire
- A carpenter assesses house value before the fire.
- *Jokai* and *Koju* decided quota allocation of wood materials for reconstruction.
- Provide daily commodities and basic goods.
- Help with clean up and rebuilding.

Ultimately, the community rebuilds the house.

What is *Myochu*?

- A management unit for Shinto rituals such as autumn festivals held in the three districts of Saga, Takatsui, Miyamae.
- A district is divided into a shrine parishioner unit called a *Myochu*, and the autumn festival is managed by a *Myochu* unit every other year or once per several years.

- Example: Saga *Myochu* has its own Budget Committee
- Community governance peculiar to Japan

Example: Reconstruction after Fire

(Hirajikage *Jokai*/Hiraji-hinochi *Jokai*)

A fire broke out about 10 years ago.

In Saga District, there was an organization called *Jikyodan*, and this organization is the decision-making agency for two *Jokai*.

Instructions were given by *Jikyodan*. Two members from each household were called; and for two days, they helped with cleanup and warm meals to support the afflicted family.

Because of aid from the community, people are careful not to cause fires.

Management of *Myochu*

- Chairperson (Requirements, selection method, term, etc.)
  Varies by community. Members take turns.
- Support members (Accountant, etc.)
  Change every year. Members take turns.
- Decision making (regular meetings, frequency, etc.)
  Once or twice a year. Varies by community.
- Agenda (10 years ago and today)
  Almost no change in agenda

Local Study

- Local study to revive community resources
- Looking for what exists (community resources: agriculture, culture, food, tradition, history, etc.)
- People living in the community are called the "people of the land," while people not living in the community are called the "people of the wind".
- Explore the traditional culture and thinking of the community people.
- Formulate measures to create a sustainable community (living, earning, environmental conservation, learning, interaction, etc.)

Rural Household Economy

related to lifestyle and cooperation with neighbors

Yutaro Senga, Professor Emeritus, Graduate School of Agriculture, Tokyo University of Agriculture and Technology

Four Community Economies :

Original farming village　　Today's farming village

Multifaceted Value in Rural Areas

- Existence of villages has become more and more important for cities, where many people live.
- Multifaceted value (land and nature conservation, cultural heritages, food production, education, recreation, etc.)
- Important as a place for solutions to four global crises (environmental crisis, energy crisis, food crisis and community crisis)
- Unless farming and mountain villages are healthy, cities will have problems, so the entire nation will have problems.

Restoration of the individual value of one's village is important.

Current State of Agriculture

- Sakura Momo Ichigo (strawberry) is produced in the village and branding has been successful.
- The produce grown in the village is gathered at the agricultural cooperative, which was established by farmers, and production, shipment, processing and sales are integrated.
- Business is the role of the cooperative while mutual aid is provided at *Koju* and division groups.

Create Community-Specific Features

- Culture of helping one another (mutual aid)
- Culture for communication (history and traditional events)
- Culture of nurturing nature and environment (nature worship)
- Culture of food (traditional food, preserved food, local production for local consumption)

  etc.
- Land, road and buildings shared, etc.

Create Vitality in the Community and People

Looking for what exists: perceive your strength and the strength of the community.
Then, be proactive.
Revitalizing oneself will create an atmosphere filled with vitality.

How to Pass Things on?

- Understand the value of community-specific features
- Understand the value, appealing aspects and pride of the community

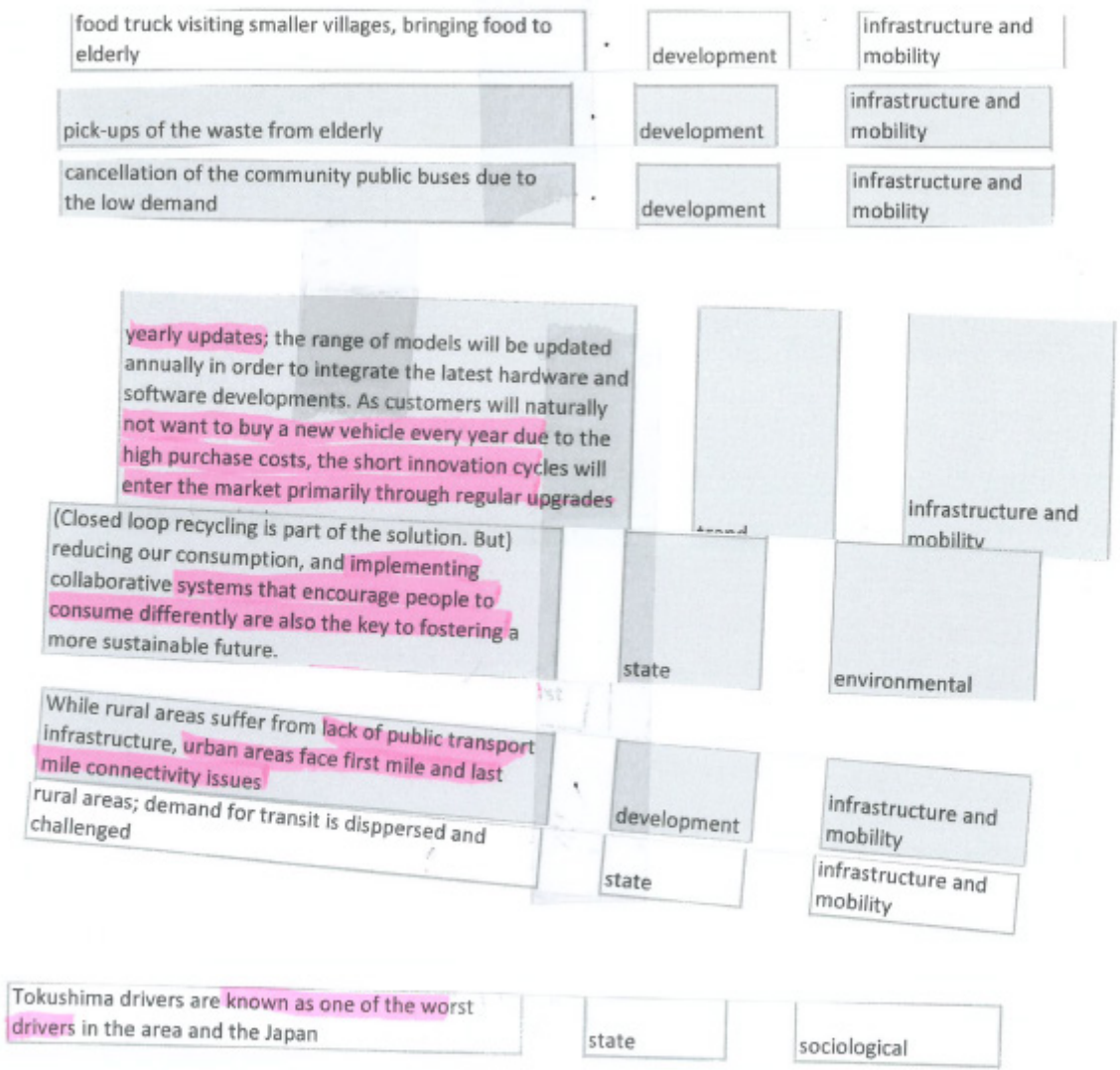
  (Exploring what exists = Local study)

Jointly contribute to the economy, living, value of life and ways to cooperate together in the community.

Explore the Community's History

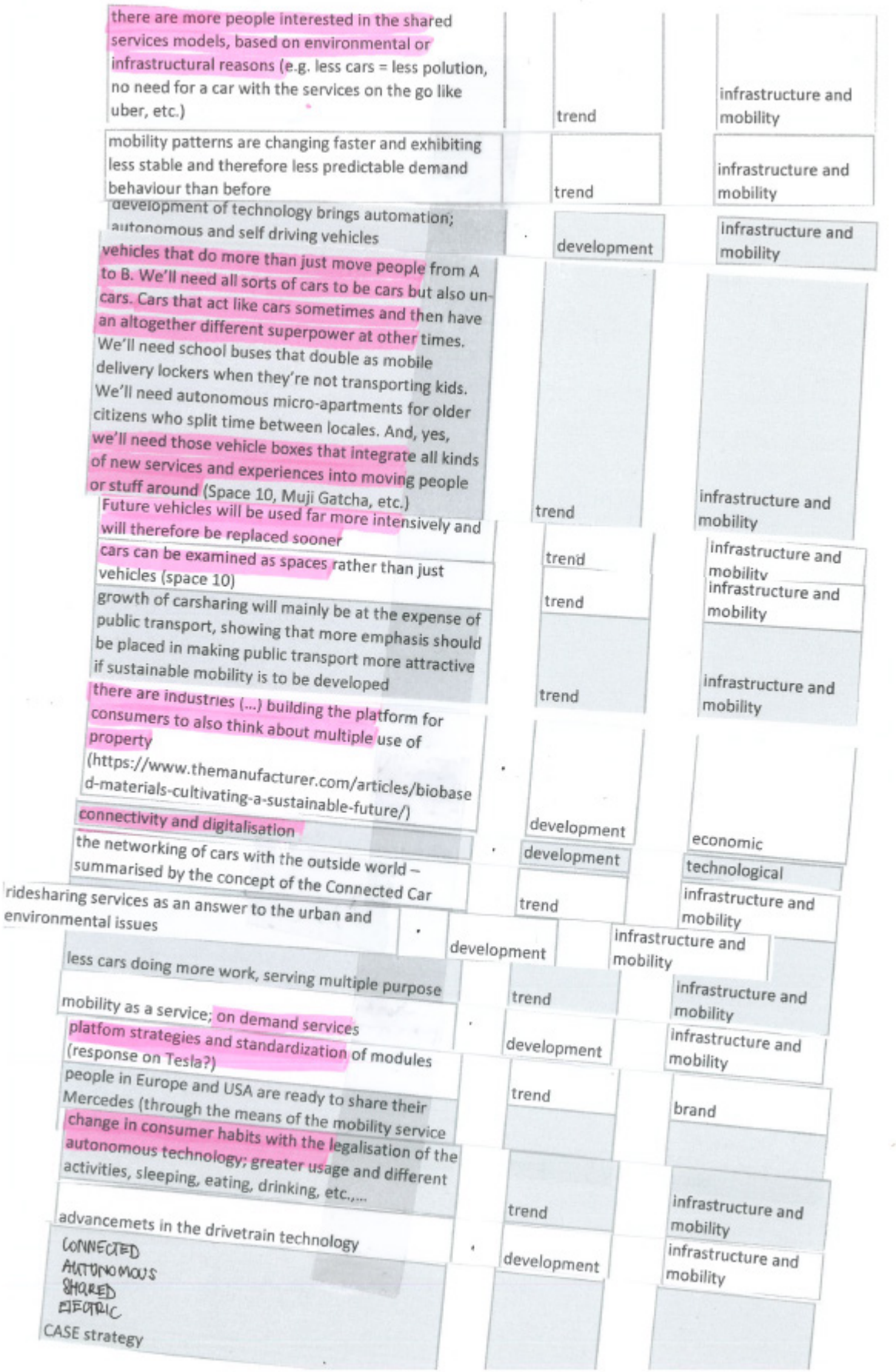
- Local study: explore the wishes of the local community through surveys on community resource application and shape pleasant memories from the past.
- The memories and history of local community forms a basis for making new histories.
- Time and processes shared in the community

Appendix
Chosen factors building the future context



there are more people interested in the shared services models, based on environmental or infrastructural reasons (e.g. less cars = less polution, no need for a car with the services on the go like uber, etc.)	trend	infrastructure and mobility
mobility patterns are changing faster and exhibiting less stable and therefore less predictable demand behaviour than before	trend	infrastructure and mobility
development of technology brings automation; autonomous and self driving vehicles	development	infrastructure and mobility
vehicles that do more than just move people from A to B. We'll need all sorts of cars to be cars but also un-cars. Cars that act like cars sometimes and then have an altogether different superpower at other times. We'll need school buses that double as mobile delivery lockers when they're not transporting kids. We'll need autonomous micro-apartments for older citizens who split time between locales. And, yes, we'll need those vehicle boxes that integrate all kinds of new services and experiences into moving people or stuff around (Space 10, Muji Gatcha, etc.)	trend	infrastructure and mobility
Future vehicles will be used far more intensively and will therefore be replaced sooner	trend	infrastructure and mobility
cars can be examined as spaces rather than just vehicles (space 10)	trend	infrastructure and mobility
growth of carsharing will mainly be at the expense of public transport, showing that more emphasis should be placed in making public transport more attractive if sustainable mobility is to be developed	trend	infrastructure and mobility
there are industries (...) building the platform for consumers to also think about multiple use of property (https://www.themanufacturer.com/articles/biobased-materials-cultivating-a-sustainable-future/)	development	economic
connectivity and digitalisation	development	technological
the networking of cars with the outside world – summarised by the concept of the Connected Car	trend	infrastructure and mobility
ridesharing services as an answer to the urban and environmental issues	development	infrastructure and mobility
less cars doing more work, serving multiple purpose	trend	infrastructure and mobility
mobility as a service; on demand services	development	infrastructure and mobility
platfom strategies and standardization of modules (response on Tesla?)	trend	brand
people in Europe and USA are ready to share their Mercedes (through the means of the mobility service		
change in consumer habits with the legalisation of the autonomous technology; greater usage and different activities, sleeping, eating, drinking, etc.,...	trend	infrastructure and mobility
advancemets in the drivetrain technology	development	infrastructure and mobility
CONNECTED AUTONOMOUS SHARED ELECTRIC CASE strategy		

Bio-based materials can contribute to positive human health impacts in the built environment	state	biotechnical
Many biobased materials originate from products typically considered waste	state	biotechnical
materials can assume an emphasis on the final application of a product and an contribute unique interaction between people and the product (interpretative, affective, performative)	principle	biotechnical
growing rather than manufacturing the materials	trend	biotechnical
people are open for (sustainable) innovations, preserving their living area and heritage	trend	sociological
strives to use of the sustainable, even biodegradable materials	trend	environmental
innovation based on use of local resources and development of goods	trend	environmental
besides technical characterisation materials can provide relationships evoking meanings and emotions; on an affective level it can elicit the fulfillment of hedonic needs	principle	biotechnical
cradle to cradle approaches	development	environmental
the materials can can provide an embodiment that not onlt meets the practical demands of the design but also offers intangible sparks captivating people's appreciation and ultimate experience of a product beyond utilitarian assessmen	principle	biotechnical
materials emobdy unique physical and experiential properties	principle	biotechnical
designers choose specific materials on the basis of technical, experiential and aesthetic qualities materials can posess	state	biotechnical
Artists and designers need the scientific know-how of biologists, while biologists benefit from the big-picture thinking and outside perspective of artists and designers	state	biotechnical
biologists become a new type of designer, working with a very powerful substrate: life	development	biotechnical
appearance of fields such as; growing design, digital biofabrication, augumented biology, biodesign fiction	development	biotechnical
awareness of and desire to use bio-based and/or bio-degradable materials	development	biotechnical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trend
infrastructure and mobility
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Infrastructure and mobility
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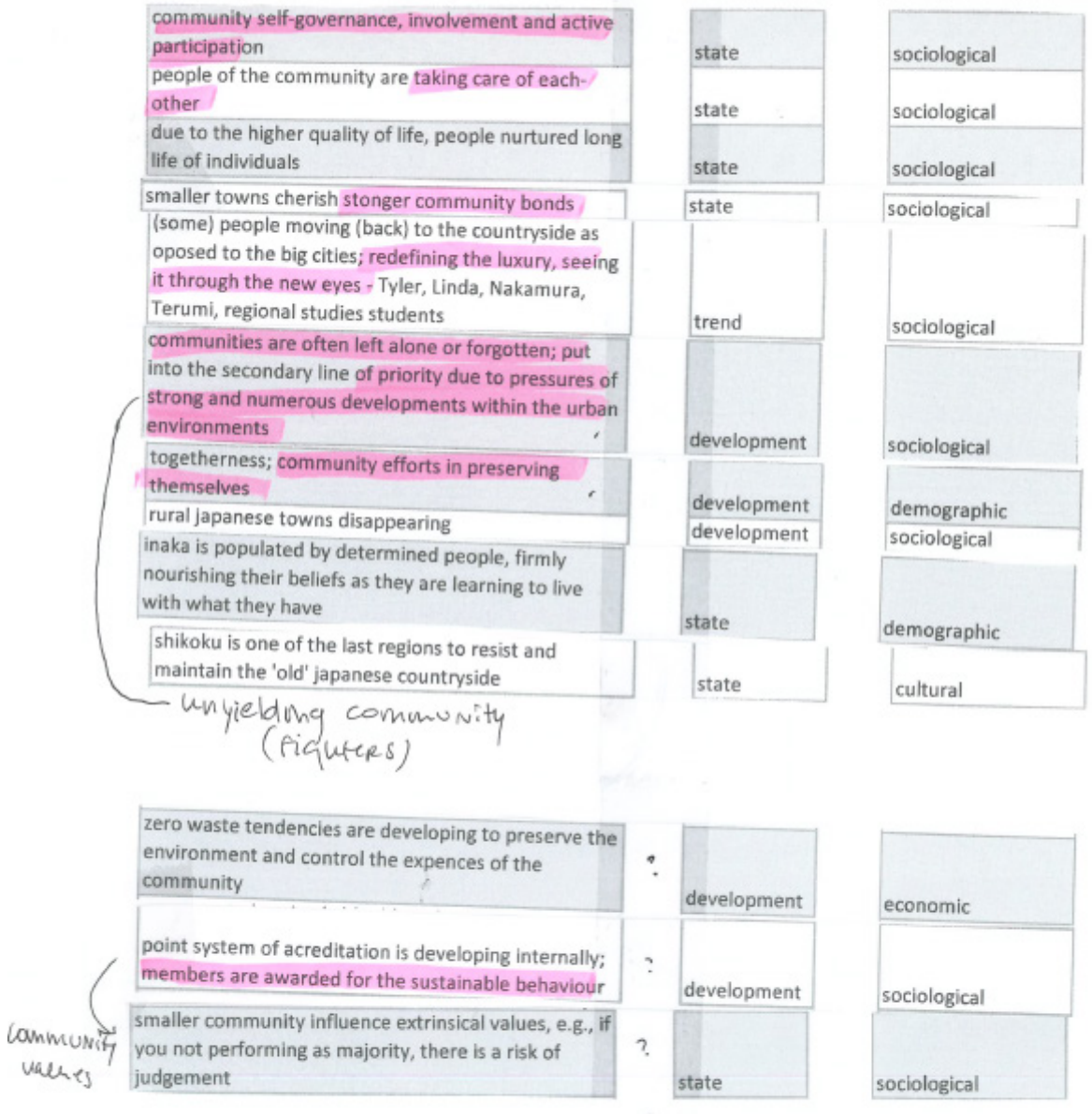
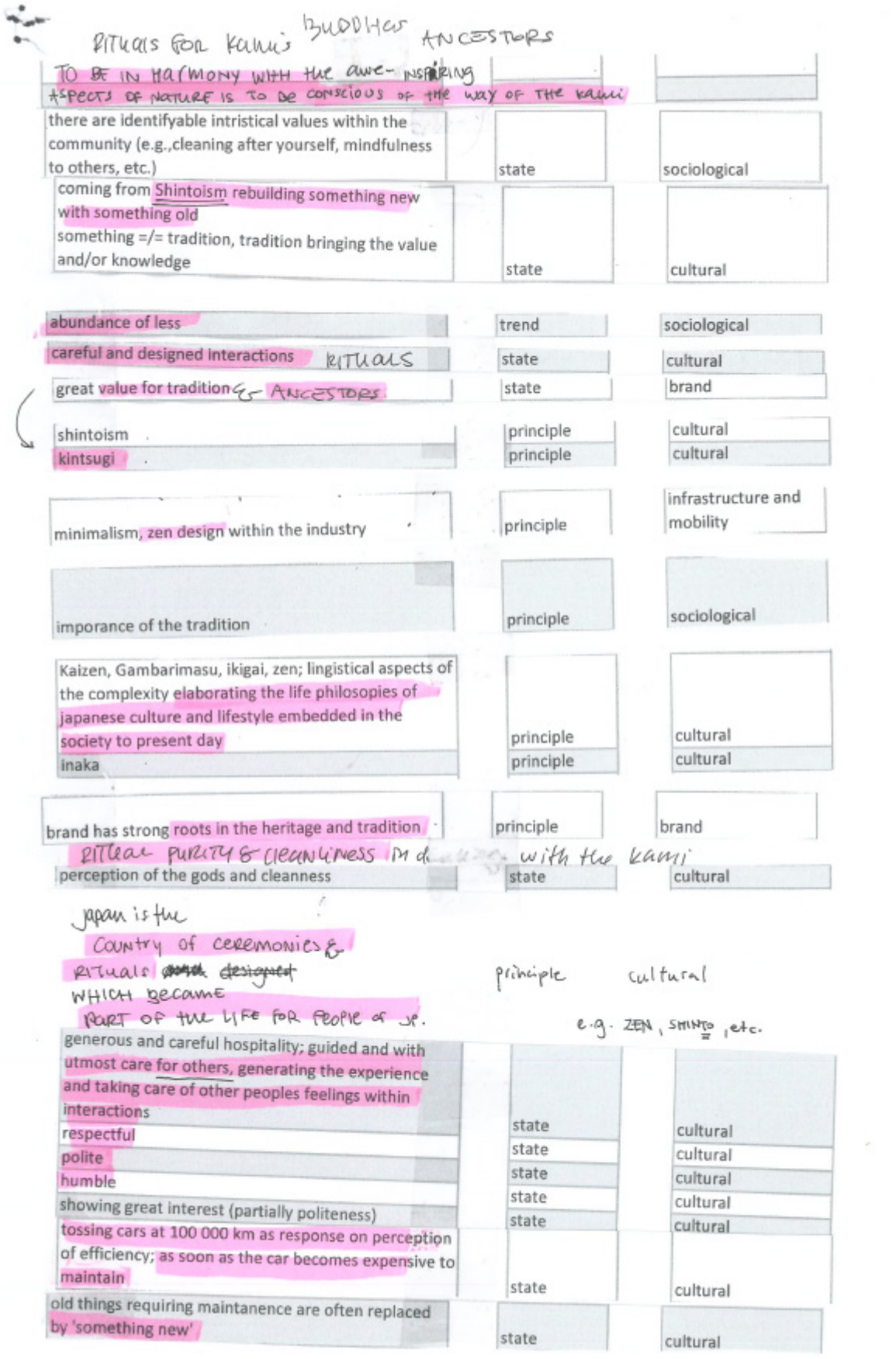
CASE strategy

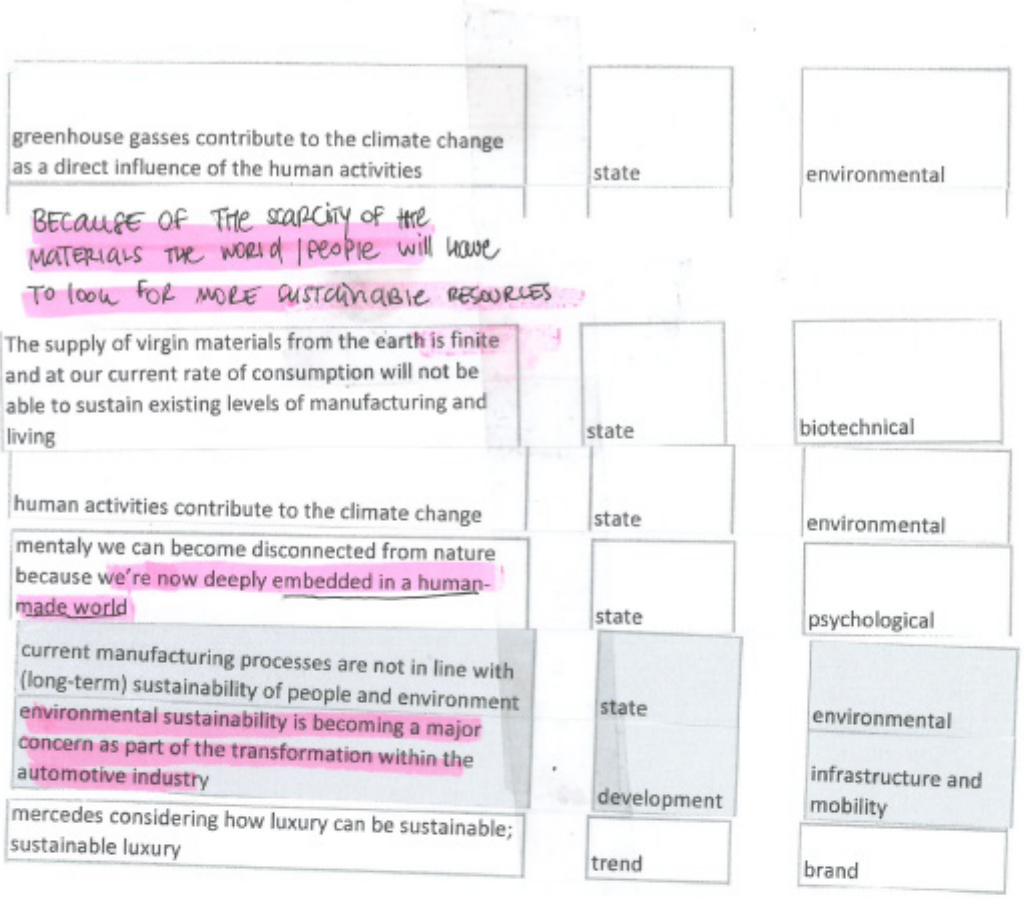

community self-governance, involvement and active participation
state
sociological
people of the community are taking care of each-other
state
sociological
due to the higher quality of life, people nurtured long life of individuals
state
sociological
smaller towns cherish stonger community bonds
state
sociological
(some) people moving (back) to the countryside as oposed to the big cities; redefining the luxury, seeing it through the new eyes - Tyler, Linda, Nakamura, Terumi, regional studies students
trend
sociological
communities are often left alone or forgotten; put into the secondary line of priority due to pressures of strong and numerous developments within the urban environments
development
sociological
togetherness; community efforts in preserving themselves
development
demographic
rural japanese towns disappearing
development
sociological
inaka is populated by determined people, firmly nourishing their beliefs as they are learning to live with what they have
state
demographic
shikoku is one of the last regions to resist and maintain the 'old' japanese countryside
state
cultural
unyielding community (figures)
zero waste tendencies are developing to preserve the environment and control the expences of the community
development
economic
point system of acreditation is developing internally; members are awarded for the sustainable behaviour
development
sociological
community values
smaller community influence extrinsical values, e.g., if you not performing as majority, there is a risk of judgement
state
sociological

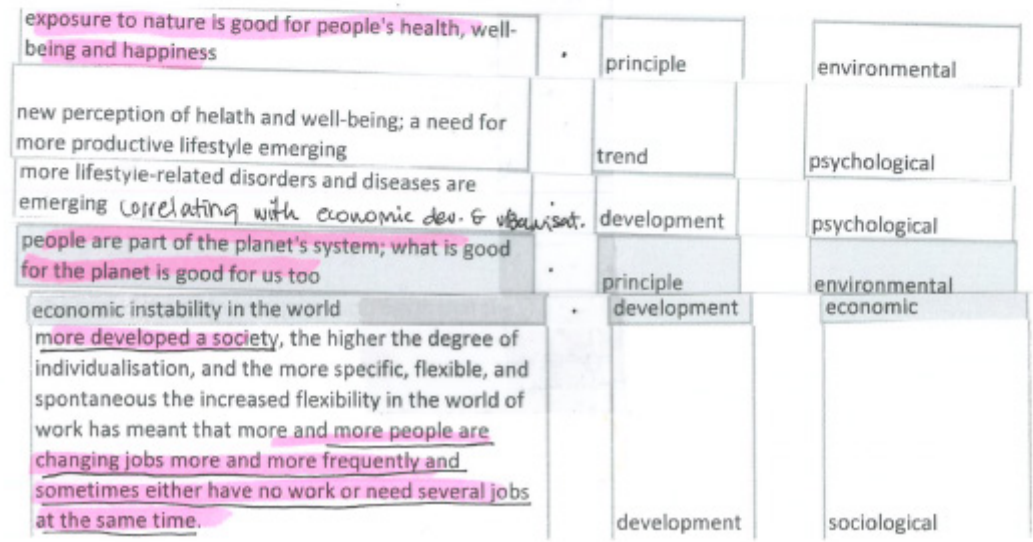


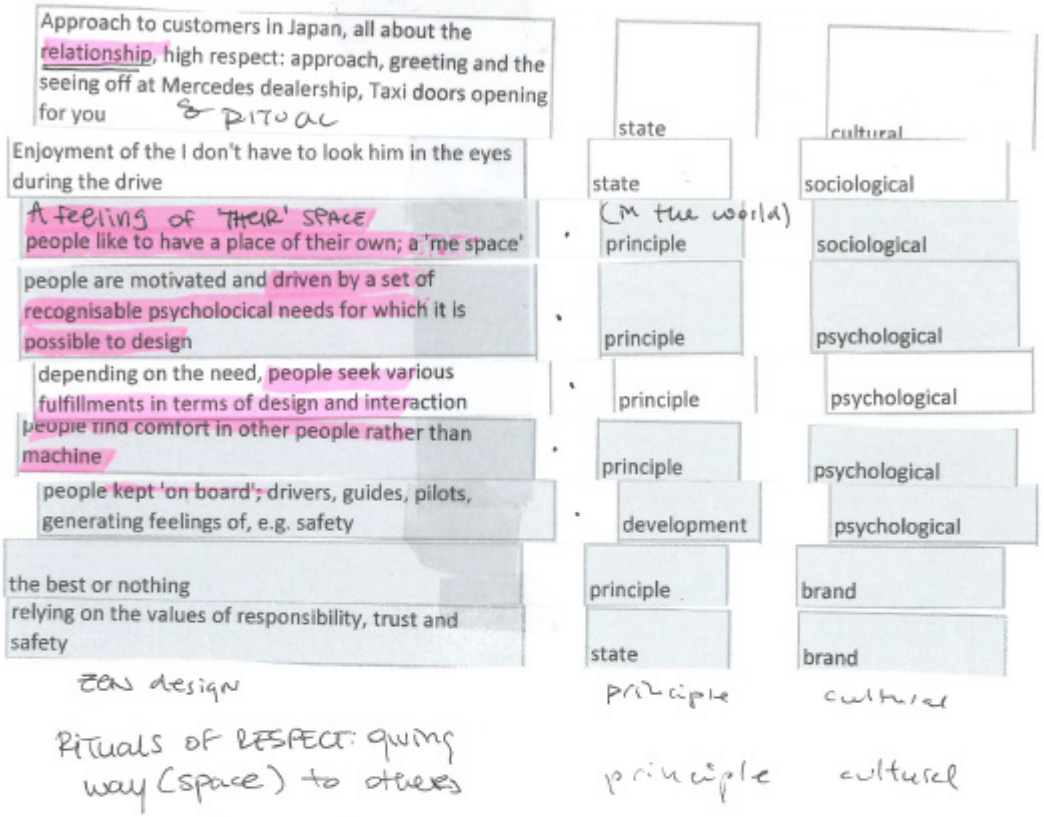
RITUALS FOR KAMI'S BUDDHA ANCESTORS

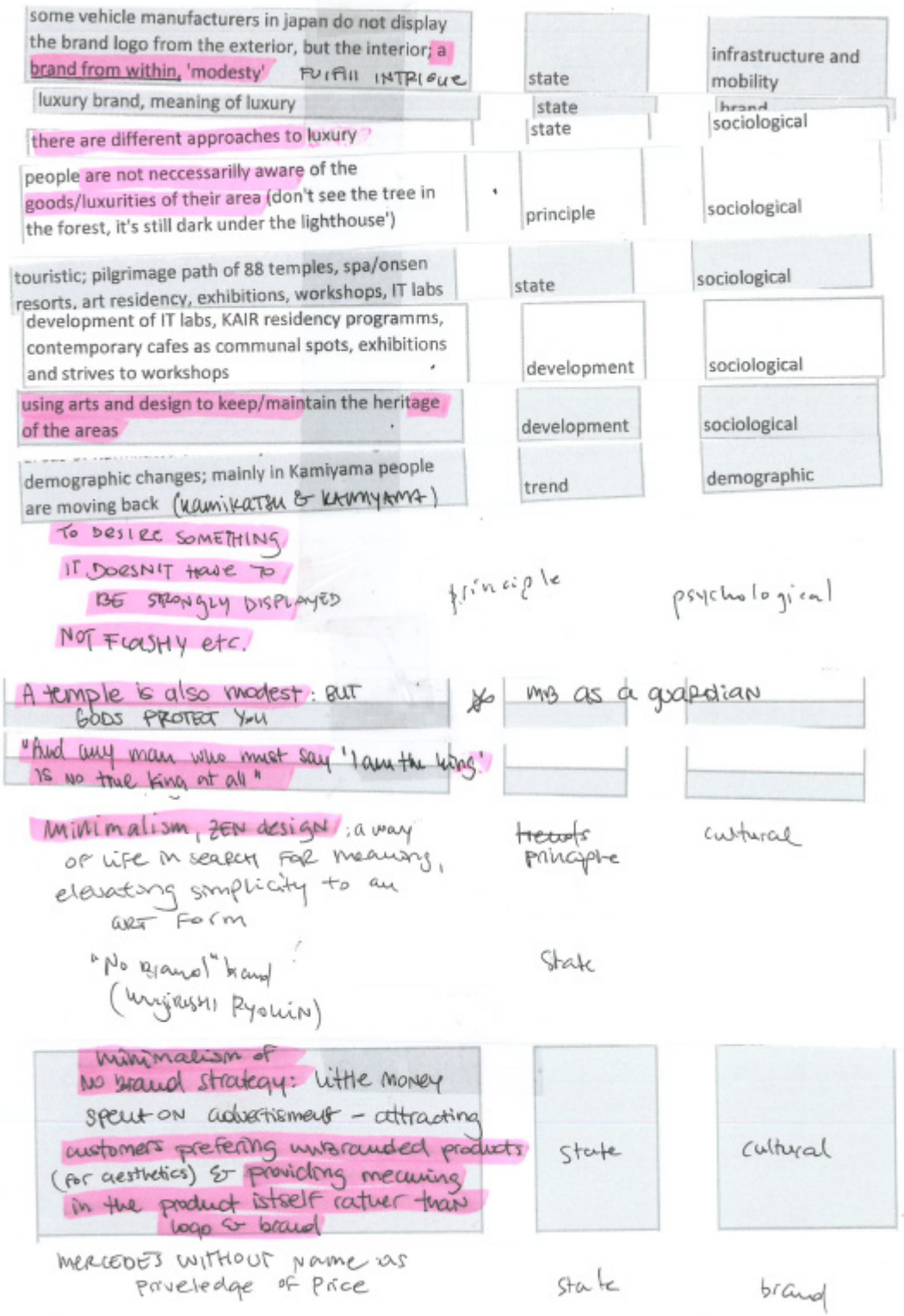
TO BE IN HARMONY WITH THE AWE-INSPIRING ASPECTS OF NATURE IS TO BE CONSCIOUS OF THE WAY OF THE KAMI

there are identifyable intristical values within the community (e.g.,cleaning after yourself, mindfulness to others, etc.)	state	sociological
coming from Shintoism rebuilding something new with something old something =/= tradition, tradition bringing the value and/or knowledge	state	cultural
abundance of less	trend	sociological
careful and designed interactions RITUALS	state	cultural
great value for tradition & ANCESTORS	state	brand
shintoism	principle	cultural
kintsugi	principle	cultural
minimalism, zen design within the industry	principle	infrastructure and mobility
imporance of the tradition	principle	sociological
Kaizen, Gambarimasu, ikigai, zen; lingistical aspects of the complexity elaborating the life philosopies of japanese culture and lifestyle embedded in the society to present day	principle	cultural
inaka	principle	cultural
brand has strong roots in the heritage and tradition	principle	brand
RITUAL PURITY & CLEANLINESS IN d... with the KAMI perception of the gods and cleanness	state	cultural
Japan is the country of ceremonies & rituals ~~designed~~ WHICH became PART OF THE LIFE FOR PEOPLE OF JP. e.g. ZEN, SHINTO, etc.	principle	cultural
generous and careful hospitality; guided and with utmost care for others, generating the experience and taking care of other peoples feelings within interactions	state	cultural
respectful	state	cultural
polite	state	cultural
humble	state	cultural
showing great interest (partially politeness)	state	cultural
tossing cars at 100 000 km as response on perception of efficiency; as soon as the car becomes expensive to maintain	state	cultural
old things requiring maintanence are often replaced by 'something new'	state	cultural

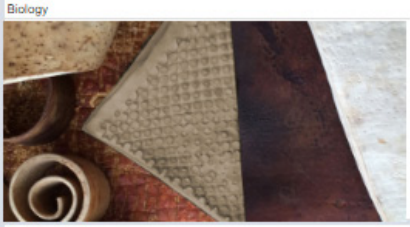
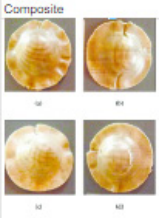

greenhouse gasses contribute to the climate change as a direct influence of the human activities
state
environmental
BECAUSE OF THE SCARCITY OF THE MATERIALS THE WORLD PEOPLE WILL HAVE TO LOOK FOR MORE SUSTAINABLE RESOURCES
The supply of virgin materials from the earth is finite and at our current rate of consumption will not be able to sustain existing levels of manufacturing and living
state
biotechnical
human activities contribute to the climate change
state
environmental
mentaly we can become disconnected from nature because we're now deeply embedded in a human-made world
state
psychological
current manufacturing processes are not in line with (long-term) sustainability of people and environment
environmental sustainability is becoming a major concern as part of the transformation within the automotive industry
state
development
environmental
infrastructure and mobility
mercedes considering how luxury can be sustainable; sustainable luxury
trend
brand


exposure to nature is good for people's health, well-being and happiness
principle
environmental
new perception of helath and well-being; a need for more productive lifestyle emerging
trend
psychological
more lifestyle-related disorders and diseases are emerging correlating with economic dev. & behavior.
development
psychological
people are part of the planet's system; what is good for the planet is good for us too
principle
environmental
economic instability in the world
development
economic
more developed a society, the higher the degree of individualisation, and the more specific, flexible, and spontaneous the increased flexibility in the world of work has meant that more and more people are changing jobs more and more frequently and sometimes either have no work or need several jobs at the same time.
development
sociological


Approach to customers in Japan, all about the relationship, high respect: approach, greeting and the seeing off at Mercedes dealership, Taxi doors opening for you
& RITUAL
state
cultural
Enjoyment of the I don't have to look him in the eyes during the drive
state
sociological
A feeling of 'THEIR' SPACE
people like to have a place of their own; a 'me space'
(IN the world)
principle
sociological
people are motivated and driven by a set of recognisable psycholocical needs for which it is possible to design
principle
psychological
depending on the need, people seek various fulfillments in terms of design and interaction
principle
psychological
people find comfort in other people rather than machine
principle
psychological
people kept 'on board'; drivers, guides, pilots, generating feelings of, e.g. safety
development
psychological
the best or nothing
principle
brand
relying on the values of responsibility, trust and safety
state
brand
ZEN design
principle
cultural
Rituals of RESPECT: giving way (space) to others
principle
cultural

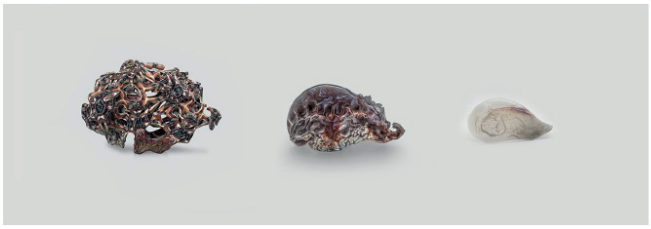

some vehicle manufacturers in japan do not display the brand logo from the exterior, but the interior; a brand from within, 'modesty' FULFILL INTRIGUE
state
infrastructure and mobility
luxury brand, meaning of luxury
state
there are different approaches to luxury
state
sociological
people are not neccessarilly aware of the goods/luxurities of their area (don't see the tree in the forest, it's still dark under the lighthouse')
principle
sociological
touristic; pilgrimage path of 88 temples, spa/onsen resorts, art residency, exhibitions, workshops, IT labs
state
sociological
development of IT labs, KAIR residency programms, contemporary cafes as communal spots, exhibitions and strives to workshops
development
sociological
using arts and design to keep/maintain the heritage of the areas
development
sociological
demographic changes; mainly in Kamiyama people are moving back (KAMIKATSU & KAMIYAMA)
trend
demographic
TO DESIRE SOMETHING
IT DOESN'T HAVE TO
BE STRONGLY DISPLAYED
NOT FLASHY etc.
principle
psychological
A temple is also modest: BUT GODS PROTECT YOU
MB as a guardian
"And why man who must say 'I am the king' is no true king at all"
Minimalism, ZEN design; a way of life in search for meaning, elevating simplicity to an art form
principle
cultural
"No brand" brand (MUJIRUSHI RYOHIN)
State
minimalism of no brand strategy: little money spent on advertisement - attracting customers prefering unbranded products (for aesthetics) & providing meaning in the product itself rather than logo & brand
State
Cultural
MERCEDES WITHOUT name as priveledge of price
State
brand

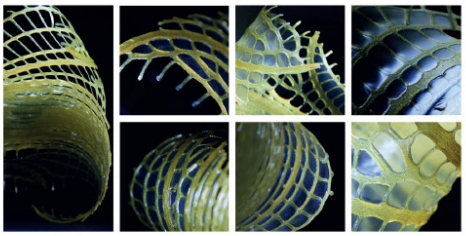
Appendix
Material research

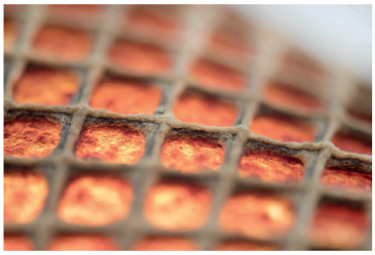
Enhancing Natural Materials				
	Biology	Composite	Composite	Composite
Application Picture/Sample				
Name	Mycelium leather	Bamboo PLA composites	Coffee Based Material	Blood-related
Manufacturer	MycoWorks, http://www.mycoworks.com/		Coffe Based	Basse Stiftgen
Composition	mycelium, agricultural by-products in carbon-negative process	bamboo fibres as reinforcing agent for polymeric composites	coffee grounds + biopolymer	leftover industry blood
(Ram state Picture)	-	-	-	-
Technical Properties	strong, flexible, durable, versatile	3x higher breaking point of pla, long lifetime in a solid form without rapid degradation	renewable, flexible, medium weight	hard, smooth, solid
Experiential qualities	pride of animal-free and sustainable material (?)	strong	hard, warm, coffee smell, leather look, matte	black, mystical
Applications	clothes, linings, decorative, protective layers	structural building composite	– granulate: injection moulding – sheet: vacuum forming	in general: various, these specific objects: eggholder, record, record-player
Activities	clothing manufacturing		tableware, small objects	exhibiting
Ultimate Purpose	natural fibre, 100% biodgradable leather	-	-	raising awareness
Process				
Enhancement	Controlled biology	Composite of two fibre types		
source + further examples	http://compositeslab.com/composites-101/what-are-composites/			

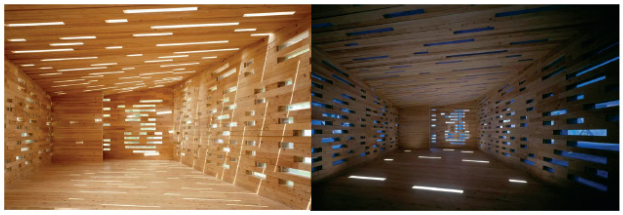
	Composite	Composite	Hybrid		Coating	Pressing	Structural	
	Artichair	Wikitoria Szawiel	Algae Lab	Mycelium Chair	Organotex	Forest Wool	Truss Me	
	Spyros Kizis	Wiktoria Szawiel	Klarenbeek & Dros, Atelier Luma	Eric Klarenbeek & University of Wageningen	Organoclick AB	Tamara Cyjola	Sandeep Sangaru	
	artichoke thistle and biological resin abstracted from cooking oil	various grasses, plants, wood, wicker and rattan mixed with resin	biopolymers from algae	3D printing straw + yellow oyster mushroom (fungus)	plant-based catalysts + organic polymers	pine needles leftovers from timber industry	bamboo	
	performs like plastic: sturdy, mouldable	sturdy, durable, strong	similar to regular plastics: – composites with sugar cane more durable but less compostable – 100% compostable, less suitable as harder biopolymer	solid, lightweight, strong, durable	repel moisture while remaining strongly bonded to the fabric fibres	strong, versatile, flexible, durable	strong, solid, durable, lightweight	
		textures, opacities, revealing (inner touch (printing)	transparent, rough to	light, sturdy	biodegradable, breathable	biodegradable, ecological, high-quality, elegant look and feel	sustainable	
	interior furnishes	furniture collections, vases, containers	tableware, storage systems, waste disposal, etc.	furniture, interiors	covering textiles enhancing textiles	textiles, furniture	furnishing systems	
	replacement for plastics	enhancing + revealing plant fibers	replacement for plastics	exhibit, represent new potentials	enhancing textiles	decoration, nesting	enhancing of the material	
	Gizis as an advocate for Greek's struggling economy utilized nationally grown crop for consumer products material and biofuel	translating different aspects of landscape into materials, colours, techniques and shapes by combination of natural and artificial	3D Bakery network of object manufacturing and sale shops	to bring together the machine and nature to bring about a new material, and be able to create any product	enhancing textiles	raising awareness about potential material alternatives to artificial fibres	use of the locally resourced bamboo and skills in a sustainable fashion	
	Seeking a fresh use for byproducts of the plant, designer Spyros Kizis has developed a biodegradable biomaterial composed of the plant fibers and bioresin—essentially a plant fiber–reinforced plastic. Gizis has used the material to create compression-molded components for a variety of interior furnishings, including a lounge chair, dining chair, and coffee table. Because the new composite utilizes plant components that are not employed to make biofuels, the fabrication process may be creatively coupled with biofuel production to take full advantage of the natural resource. Since the furniture is inherently biodegradable, artichoke thistle seeds are intentionally interspersed within the reinforced material during fabrication. Buried pieces can thus germinate new plants.	Some of the items were cast in purpose-designed moulds, while in other cases the resin was poured over items of wicker furniture.			inspired on nature's own chemistry and the water repellancy of the Lotus flowers leafs. With the use of the patented technology we use biodegradable plant-based catalysts and organic water repellent polymers (hydrophobic) in order to create the water repellent properties to the fabric. Wash in or sprayed on fabric to create hydrophobic properties	By crushing, soaking, steaming, binding and pressing the needles, Orjola extracts the pine needles' fibre and transforms it into textiles, composites and paper. The process also allows essential oils and dye to be extracted and used.	the components used for construction are modular and repetitive, and can be produced in batches by a group of craftsmen. the equipment involved for production are basic hand tools, through a modular system of jigs, fixtures and templates. the construction elements were quickly realized and also maintained a formal consistency and quality to the individual components. the furniture has been designed to use locally resourced bamboo and skills in a sustainable fashion.	the strong fibers of bamboo can withstand compression and tensile loads. using the properties of the fibers, 'truss me' was developed on a technique of splitting and laminating the poles with another strip of split bamboo. when the glue cures, the laminated module acts like a truss.	
		resin enhancement of wood / wicker or rattan					form of the structure &/or lamination	
	http://sansmaterial.net/artichair/	https://www.dezeen.com/2014/07/07/landscape-within-resin-furniture-wiktoria-szawiel/	https://www.rbsi.com/products/replacing-oil-based-plastics-with-algae-klarenbeek-3d-printing-stephen-coates/				https://www.designboom.com/design/bamboo-furniture-systems/	

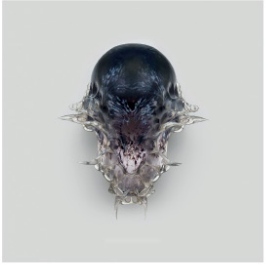

Agar plates
Controlling mycelia growth
Aggregate scaffolds



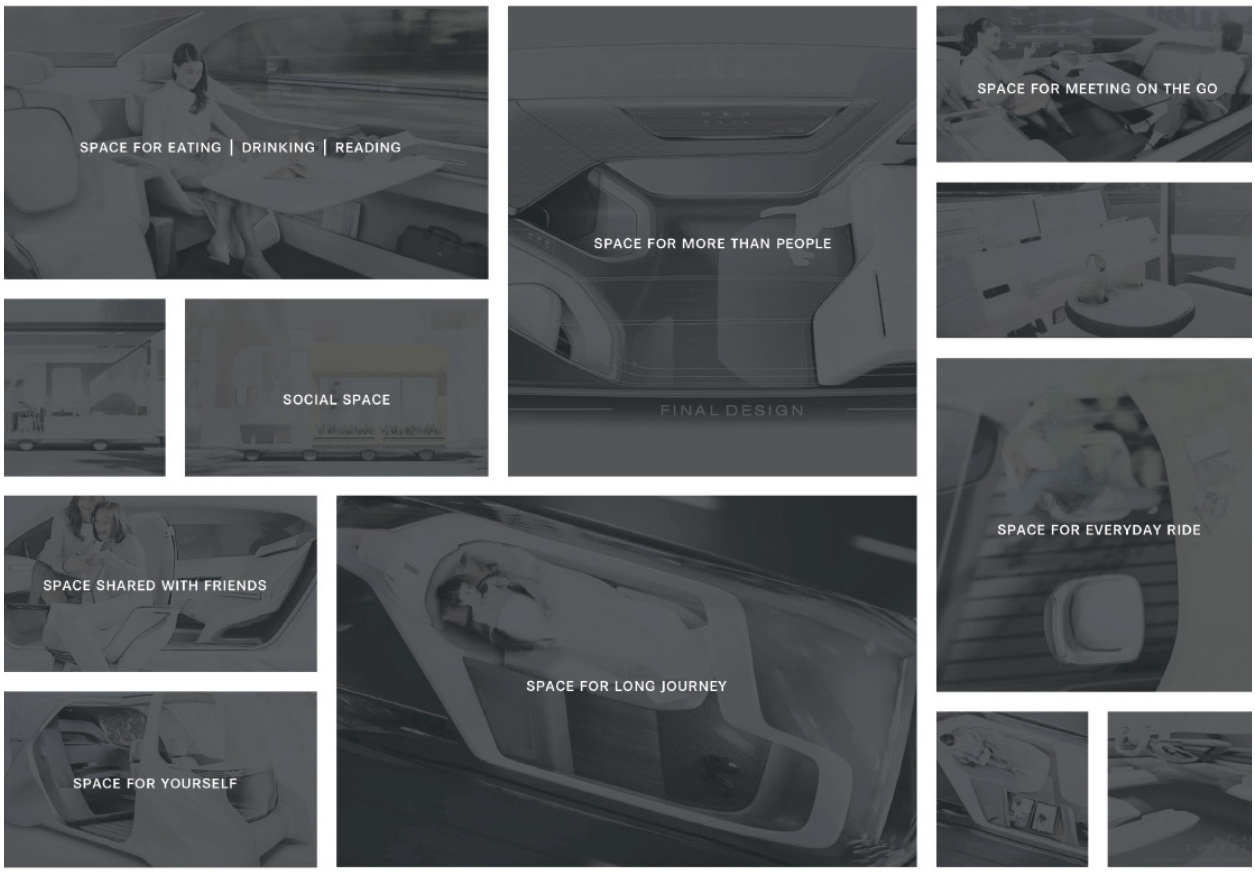








Appendix
Interior as exploration of spaces on wheels + comparison Mercedes vs. Lexus




1954 - 1957


1959 - 1971


1965 - 1972


1972 - 1980


1979 - 1992


1991 - 1998


1998 - 2005


2005 - 2013


2014 - present


1989 - 1994


1994 - 2000

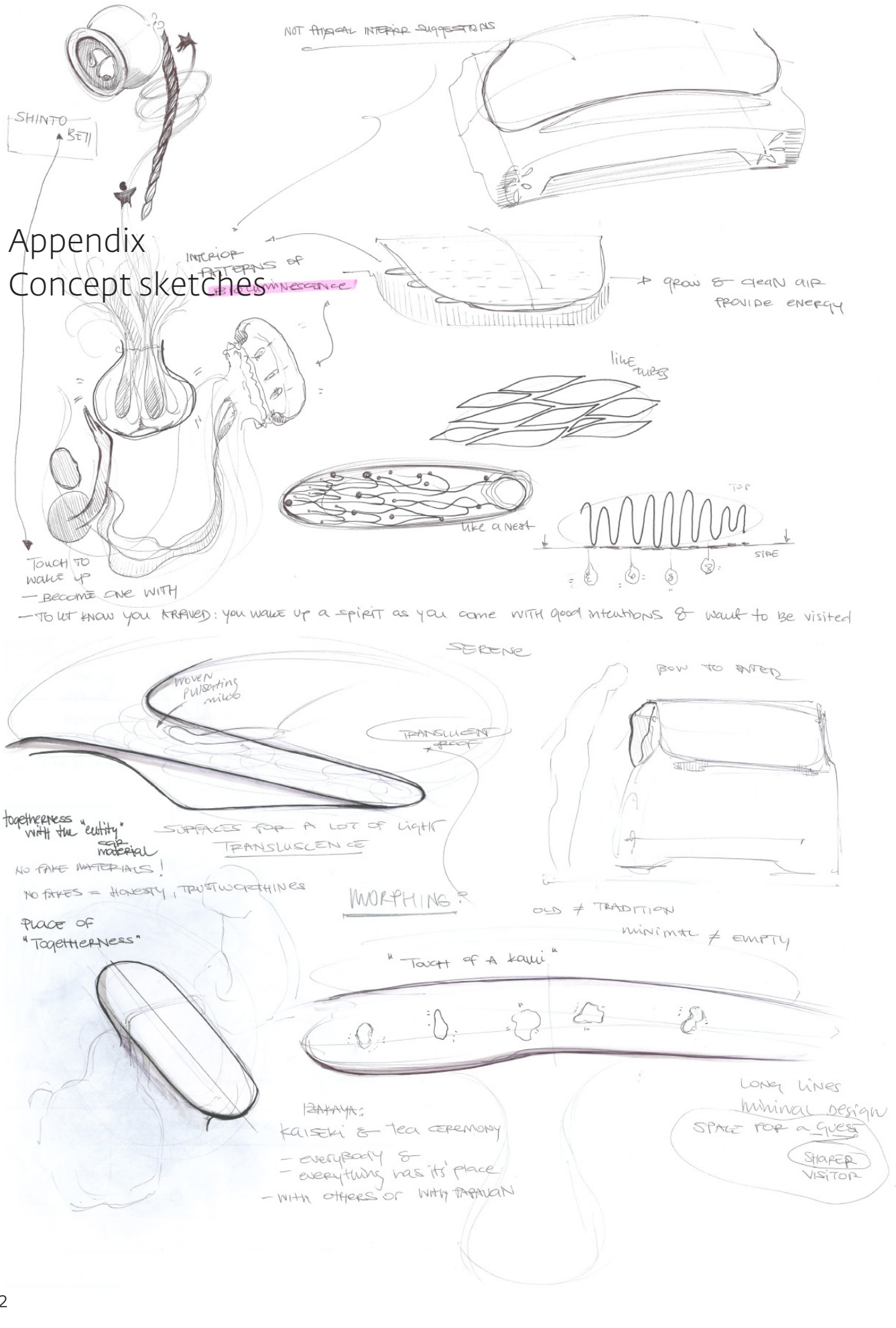

2000 - 2006

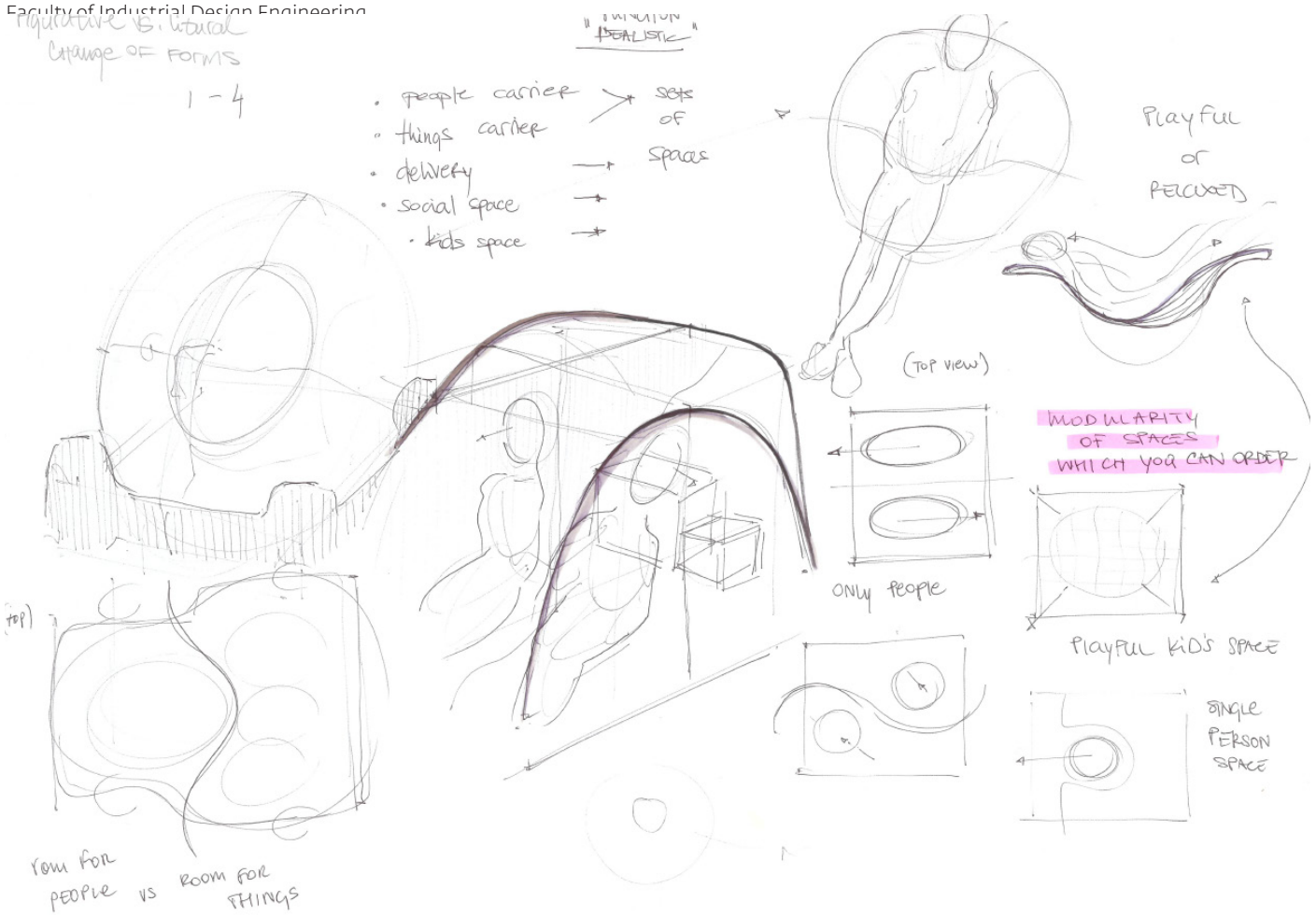

2006 - 2017

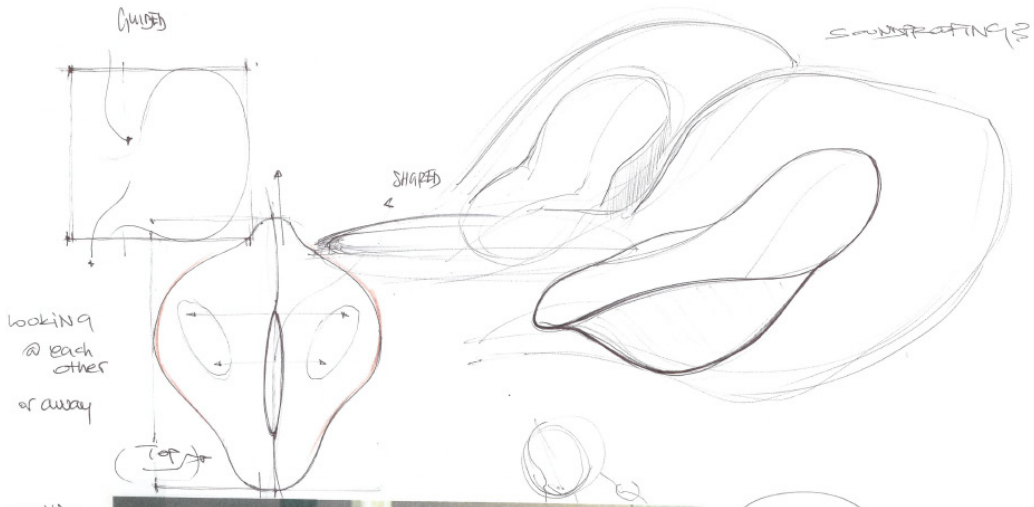

2017


2017 - present

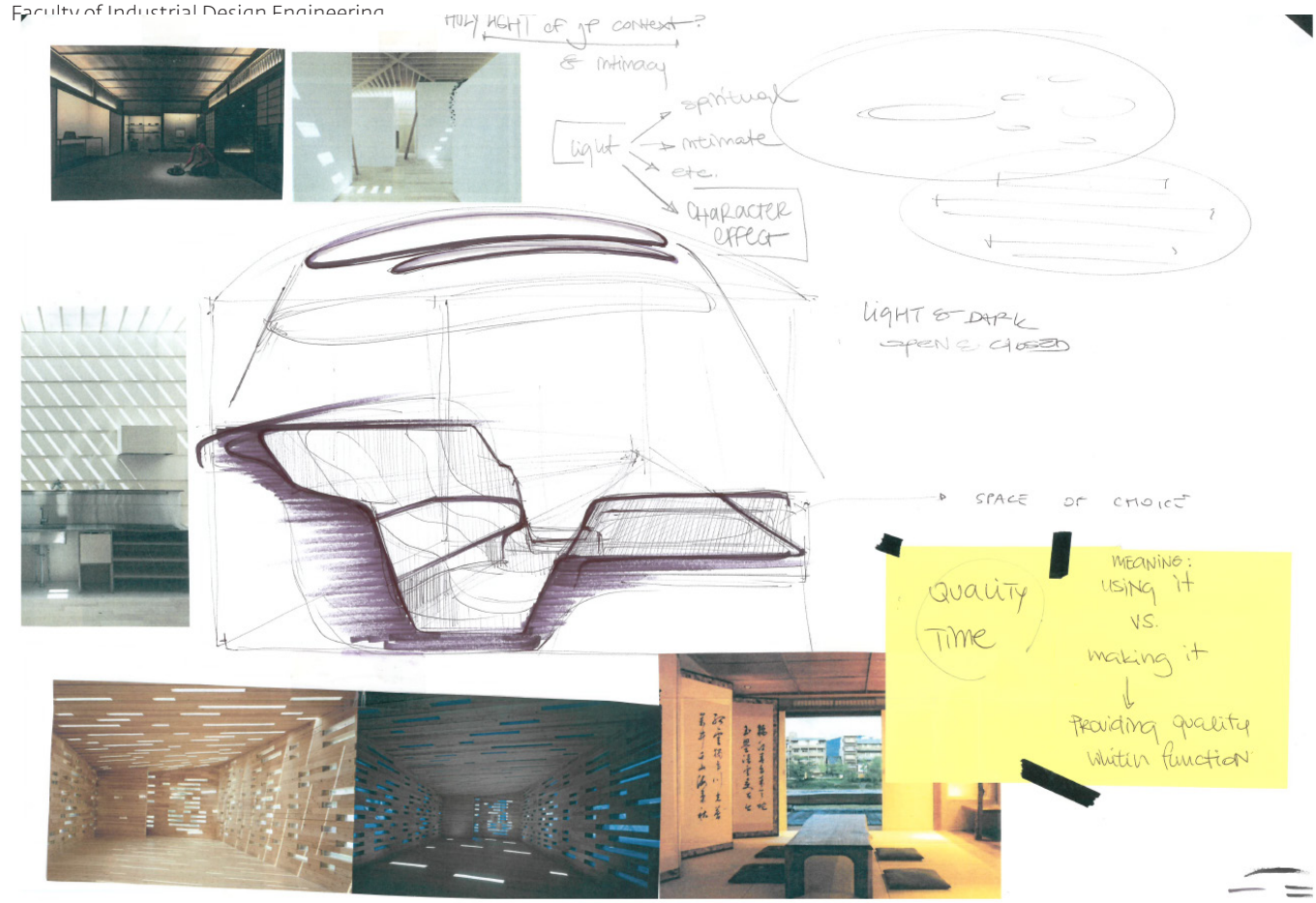
Appendix
Concept sketches

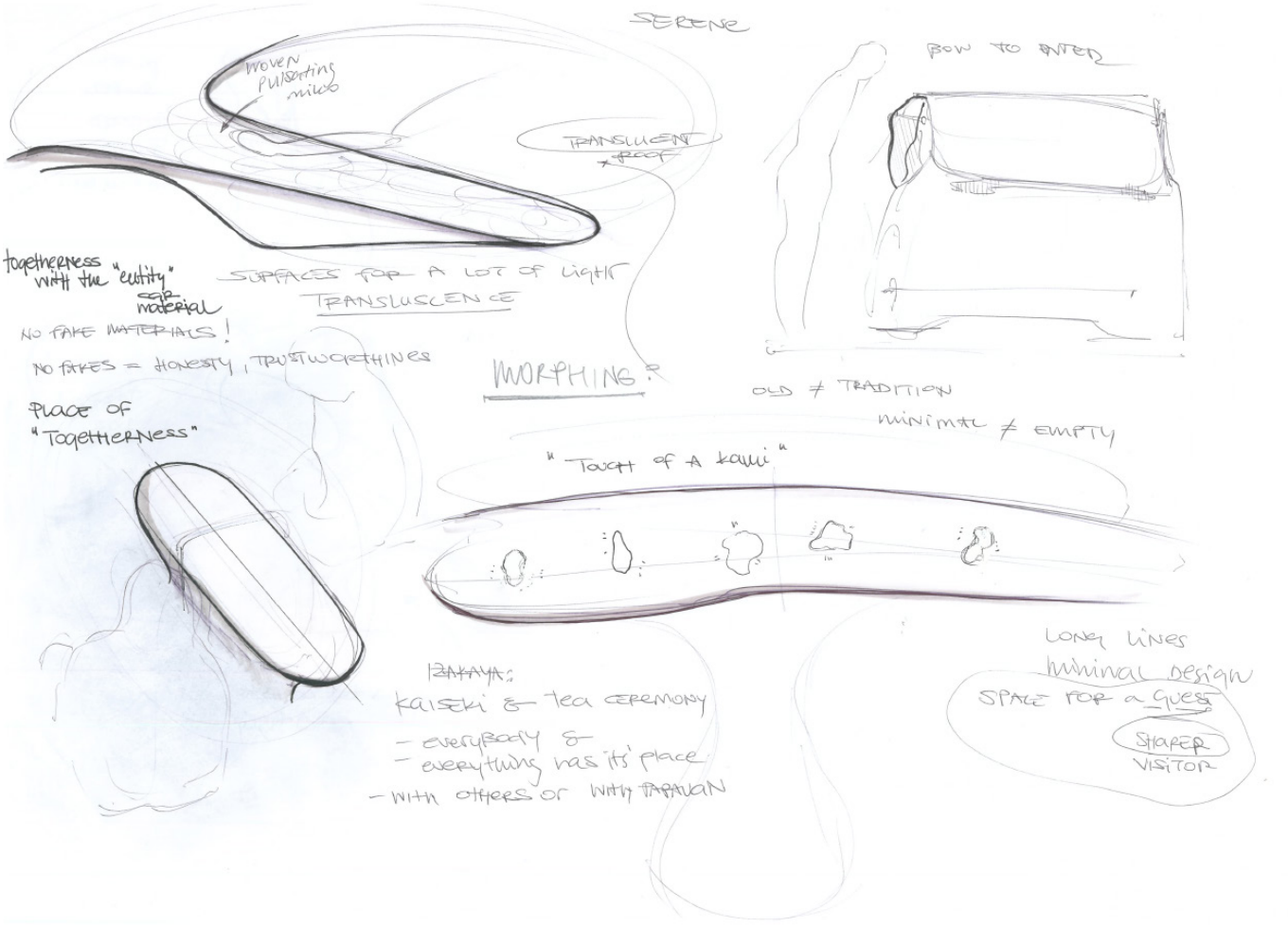




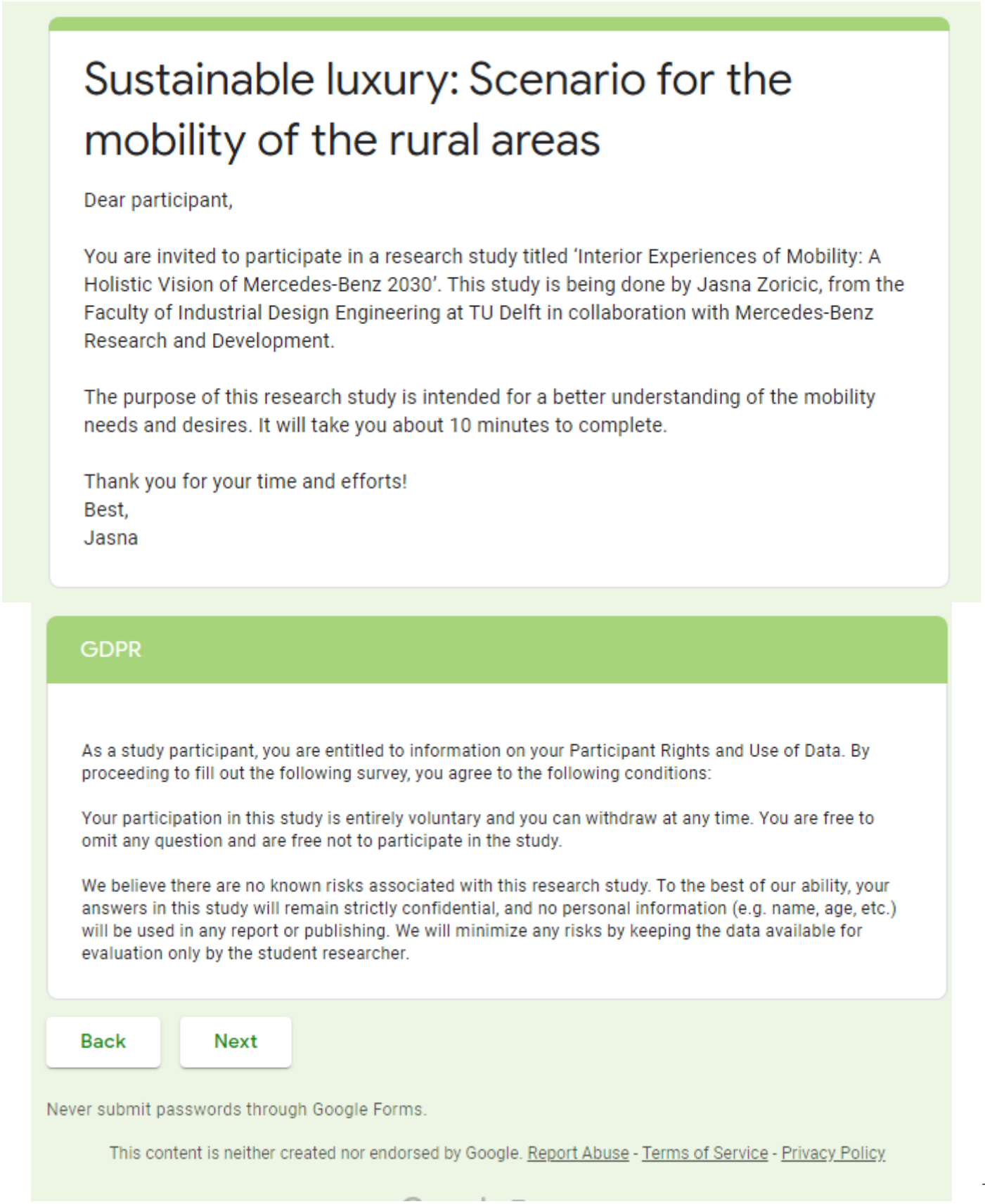


Time value in Japan
Time for yourself, time for spirituality
Quality time


light
spiritual
intimate
etc.
character effect
LIGHT & DARK
SPACE OF CHOICE
Quality Time
MEANING:
USING it
VS.
making it
Providing quality
within function


SERENE
woven
TRANSLUCENT
SURFACES FOR A LOT OF LIGHT
TRANSLUSCENCE
NO FAKE MATERIALS!
NO FAKES = HONESTY, TRUSTWORTHINES
MORPHING?
Place of
"Togetherness"
BOW TO ENTER
OLD ≠ TRADITION
minimal ≠ EMPTY
"Touch of a kami"
IZAKAYA:
kaiseki & tea ceremony
- everybody &
- everything has it's place
- with others or with
Long lines
minimal design
SPACE FOR a Guest
Shaped
VISITOR

Appendix
Concept validation



Sustainable luxury: Scenario for the mobility of the rural areas

Dear participant,

You are invited to participate in a research study titled 'Interior Experiences of Mobility: A Holistic Vision of Mercedes-Benz 2030'. This study is being done by Jasna Zoricic, from the Faculty of Industrial Design Engineering at TU Delft in collaboration with Mercedes-Benz Research and Development.

The purpose of this research study is intended for a better understanding of the mobility needs and desires. It will take you about 10 minutes to complete.

Thank you for your time and efforts!
Best,
Jasna

GDPR

As a study participant, you are entitled to information on your Participant Rights and Use of Data. By proceeding to fill out the following survey, you agree to the following conditions:

Your participation in this study is entirely voluntary and you can withdraw at any time. You are free to omit any question and are free not to participate in the study.

We believe there are no known risks associated with this research study. To the best of our ability, your answers in this study will remain strictly confidential, and no personal information (e.g. name, age, etc.) will be used in any report or publishing. We will minimize any risks by keeping the data available for evaluation only by the student researcher.

Back Next

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Mobility of the area

What is your age? *

- ○ 18-24
- ○ 25-34
- ○ 35-44
- ○ 45-54
- ○ 55-64
- ○ 75 +

Do you own a car? *

- ○ Yes
- ○ No
- ○ Other: _____

Do you think a car is needed where you live? *

- ○ Yes
- ○ No
- ○ Other: _____

If there was good public transport in your area, do you think you would still want to own a car? *

- ○ Yes
- ○ No
- ○ Other: _____

Are you familiar with the idea of car-sharing services? *

- ○ Yes
- ○ No

Have you ever used any car-sharing services? *

- ○ Yes
- ○ No

If you have used car-sharing services, which one have you used?

Your answer

If you had an opportunity would you use car-sharing services? *

- ○ Yes
- ○ No
- ○ Other: _____

Image title

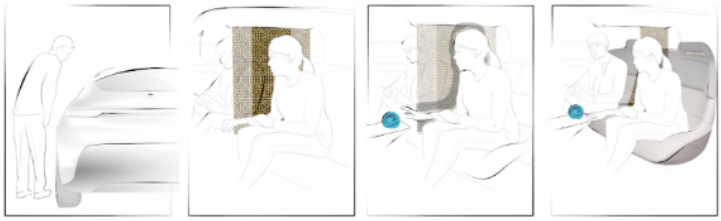


Image title

The following questions will be about the possible mobility scenario.

Please imagine there is a service that allows you to share **your** car with others.
The car would have technology supporting you, so you don't need to drive it at all times. Sometimes, **a car would drive instead of you**, but someone needs to **observe** the car at all times.

1. Pick up others
Along your route, you can pick-up others.
When a person is entering, the doors open and the car changes shape to **greet by bowing**. After a person enters, it changes back, to provide **more space from inside**.

2. Sustainable fabric
Between you and another person, there is a sustainable, **transparent fabric grown from plants.** It gives you privacy, but you are also able to see if someone is sitting next to you.

3. Ambient light
In the middle, you can turn on the **ambient light,** casting **your shade** on the fabric. By doing this, you are letting another person know you are here but are **'hidden'** by your shadow on the fabric.

4. Shared seats
However, if you know this person and would like to **share a moment together**, you can move the fabric. The **seats are connected** allowing you to choose how close or far apart you are sitting.

Would you use this service? If yes, why? If no, why? *

Long answer text

Would you be willing to share car with others? *

- Yes
- Yes, but only if I know them
- No
- Other...

Would you feel secure in the car when it is driving by itself? *

- Yes
- No
- Other...

How do you feel about the features of the concept? *

	Not at all de...	Not desirable	Somewhat d...	Desirable	Very desirable	Extremely de...
Bow as a gre...	☐	☐	☐	☐	☐	☐
Sustainable f...	☐	☐	☐	☐	☐	☐
Ambient light	☐	☐	☐	☐	☐	☐
Shared seats	☐	☐	☐	☐	☐	☐

How would you describe the experience of this concept? (e.g. relaxing, stressful, playful, etc.) *

Long answer text

Image title

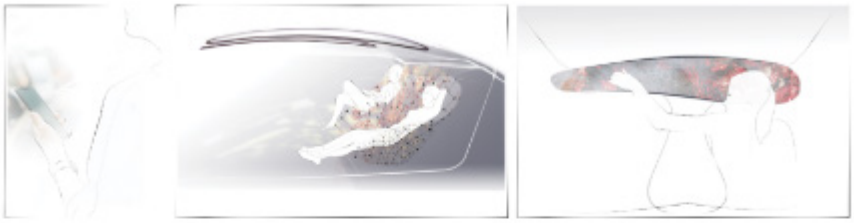


Image title

The following questions will be about the possible mobility scenario.

Please imagine there is a service that allows you to order a **community** car when needed. The car would have technology supporting you, so you **don't need to drive it, and nobody needs to oversee it**.

1.Choose who you share the ride with
When you are ordering a car you can choose to be alone in the car or to drive with others.

2. Gloving mesh seats
Inside the car, the seats are made of **mesh** on which you can sit, relax or safely store things. The mesh shapes by you, so even when you are with others you have **your own** place. As you move on the mesh it **glows**, and produces **sound**, playfully following your movement.

3. Big windows on the roof
On the roof, large windows are providing a lot of light and the view outside as you sit.

4. Grow the car
During the drive or before you leave, you can play with the dashboard in the front. It is made of living material. As you touch the car, it will slowly **grow** and **change colour** in response, leaving the mark of your presence.

Would you use this service? If yes, why? If no, why? *

Long answer text

Would you have trust in a car that is driving completely by itself? *

- ○ Yes
- ○ No
- ○ Other...

How do you feel about the features of the concept? *

	Not at all de...	Not desirable	Somewhat d...	Desirable	Very desirable	Extremely de...
Big windows ...	☐	☐	☐	☐	☐	☐
Glowing mes...	☐	☐	☐	☐	☐	☐
Dashboard w...	☐	☐	☐	☐	☐	☐

How would you describe the experience of this concept? (e.g. relaxing, stressful, playful, etc.) *

Long answer text

Image title

Image title

The following questions will be about the possible mobility scenario.

Please imagine there is a service that allows you to order a **community** car when needed. The car would have supporting technology, sometimes driving by itself. As someone needs to observe the car at all times, there would be **an official driver.**

1.Choose who you share the ride with
When you are ordering a car you can choose to be alone in the car or to drive with others.

2. Cedar division
Inside the car, each person has **his/her own seat**. In addition, there is a **'division'** made of cedar wood branches, bringing a **unique fragnance (smell)** to the interior.

3. Bio-luminescent lights
On the roof, large windows have **a pattern** of bio-luminescent **lights** (e.g. sea planktons). During the day the pattern is creating a play of **light and shade** in the interior. During the night the lights are lit and are responding to your **touch**.

4. Big central console
As you drive, if you wish to share a moment with others or work/read/create ambiance on your own, you can turn on the lights and use the **shared** area around a **big central console.**

Would you use this service? If yes, why? If no, why? *

Long answer text

Would you feel safe having someone (driver) observing the car at all times? *

- Yes
- No
- Other...

How do you feel about the features of the concept? *

	Not at all de...	Not desirable	Somewhat d...	Desirable	Very desirable	Extremely de...
Bio-luminesc...						
Cedar branch...						
Each seat for...						
Big central c...						

How would you describe the experience of this concept? (e.g. relaxing, stressful, playful, etc.) *

Long answer text

Concept questionnaire, **follow-up Interview:**

GENERAL

Age/ do you own a car/ is the car needed/ if good public transport ***would you still like to own the car?***

If you think back to your day, could you think of your use of a car…

Do you like the time spent in the car? Yes/no > why? How do you feel during the drive alone/with others? (sub-questions based on individual responses to determine desired/safe/playful/efficient/comforting/all-in-one? in-car-feeling)

- Why, why, why > response to possession, autonomy, individuality, security?

Car-sharing; **which car-sharing service you used & how was your experience / how do you imagine the service concept?**

- example; taxi, Orix (japan), uber, car2go
- which concerns would prevent you from using car-sharing s.?
- which benefits would you expect from car-sharing s.; a) for you, b) for sustainability
(if relevant/applicable, in the analysis, combine both)

When it comes to the concepts from the questionnaire, which one stayed in your mind the strongest?

Why?

Which one of the concepts would you like to use the best / least?

Which element(s) from the three concepts do you remember as the one you liked the best?

CONCEPT 1

Why would you

- use this concept

- not use this concept

Why would you

- share the car

- share the car only with people you know

- not share a car

If you imagine car driving by itself, could you imagine how you would feel? Why would you

- trust it + can you imagine what you might do in the interior as an addition to the example story (e.g. eat, sleep, work, etc.)

- not trust it + what would it take for you to become more trusting of the car + if you would then trust it, what can you imagine doing in the interior besides driving (eat, sleep, work, etc)

Which feature did you like:

- the best

- the least

- Why?

How does the whole concept/interaction of the interior feel to you? Why?

CONCEPT 2

Same as for concept 1

CONCEPT 3

Same as for concept 1 & 2 + asking

14. How would you feel about someone driving the car instead of you; official driver (e.g. like a bus or taxi driver)? Does it represent luxury from your perspective?

If you imagined having a car which you don't need to drive always, but only when you desire, would you think of these concepts:

- as minimal (in interaction with them), if the features from the concepts were very minimal in design form?

- as incomplete? Are there any additional ideas of what you would miss in the interior, to fulfill a special feeling you have during the drive? – combine to beginning, response to desired feeling within the interior; ***(indirect) how would you like to feel in the interior***

- Do you think that sustainable materials can support these feelings?

EXPLAIN THE GROWTH OF THE MATERIALS IN/BY THE LOCAL COMMUNITY > USE FOR CAR (INDIVIDUAL CONTRIBUTION OF THE COLLECTIVE COMMUNITY) > BIODEGRADABLE CYCLE > 'REINCARNATION'

GROW > USE > COMPOST = FEED > GROW (reduce, reuse, recycle; cradle2cradle)

- Which elements from these concepts would prevent you / support you in achieving this feeling? E.g. is there something missing, a special smell, a tactile rough/soft surface? A specific sound, like silence, or mimicking nature and/or ambient, or something by desire (e.g. music)

Appendix
Defining a design character

Defining a design character

All concepts represented different ideas intending to achieve a perception of an abundance of less, within the experience and perception of the product. The conclusive results of the validation test provide an outlook into which ideas worked best, thus being considered the final product elements.

Before the construction of the final design, the last step, establishing the aesthetical attributes of a product took place. The character exploration and construction is represented as a set of collages.

The collages are a visual representation of the product aesthetical characters, in line with the qualities of the interaction vision and domain. However, the characteristics of collages are not to be mistaken with the qualities identified within the interaction vision itself. The character of a product describes it's aesthetical quality, whereas the quality of an interaction describes a relationship between the product and a user.

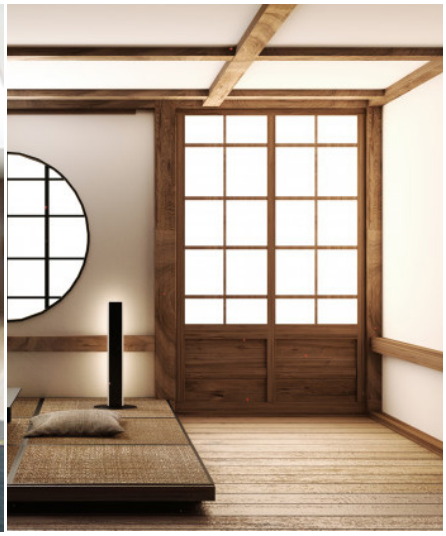
— emotive





— memes

— persona



2020