DESIGN OF VEHICLE INSTRUMENT CLUSTER FOR INDIAN AND GERMAN AUDIENCES

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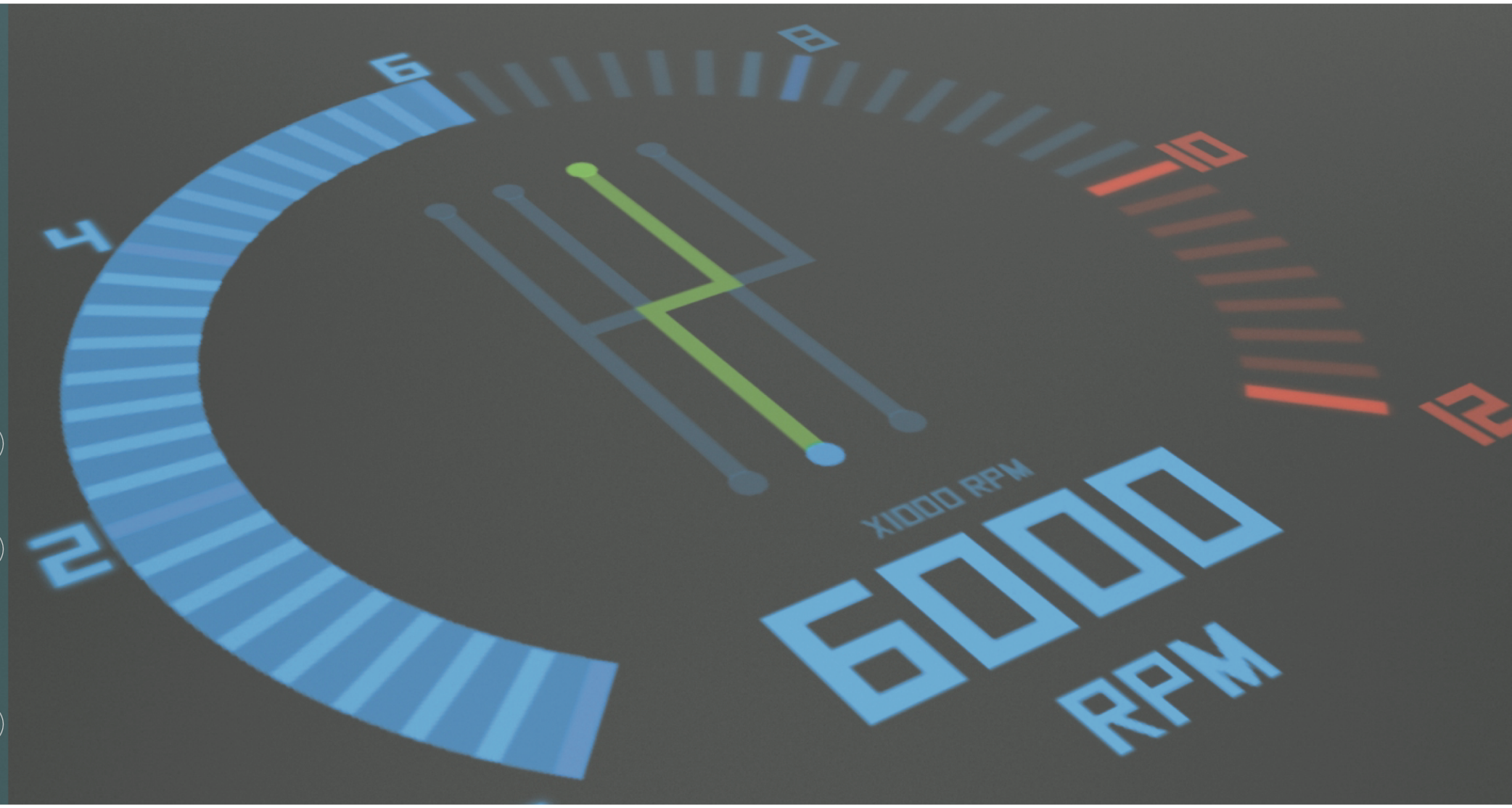


IDC IIT Bombay

IAD Technische Universität Darmstadt
Institut für Arbeitswissenschaft

Culture: An integral part of Design Process

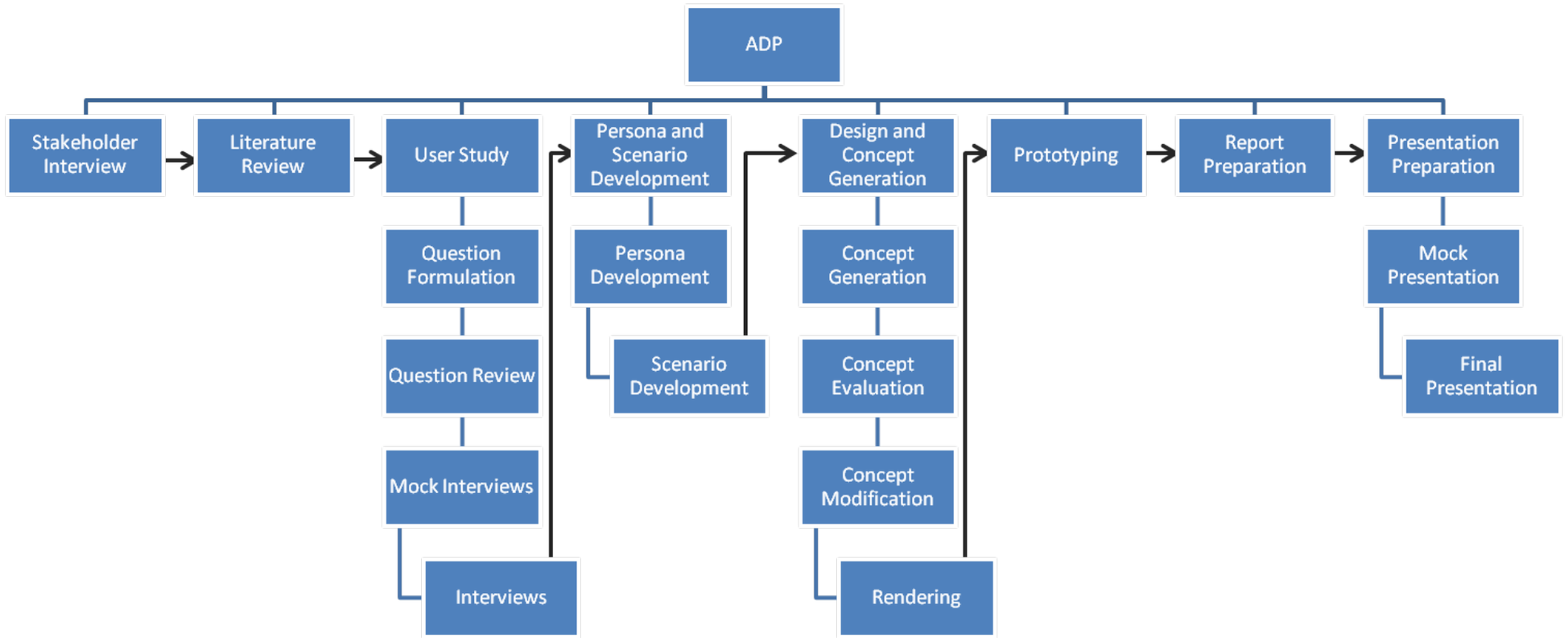
http://www.dailymail.co.uk/news/article-2443191/Gillette-spent-fortune-Indian-razor-forgetting-countrys-running-water.html seen on 26.06.14

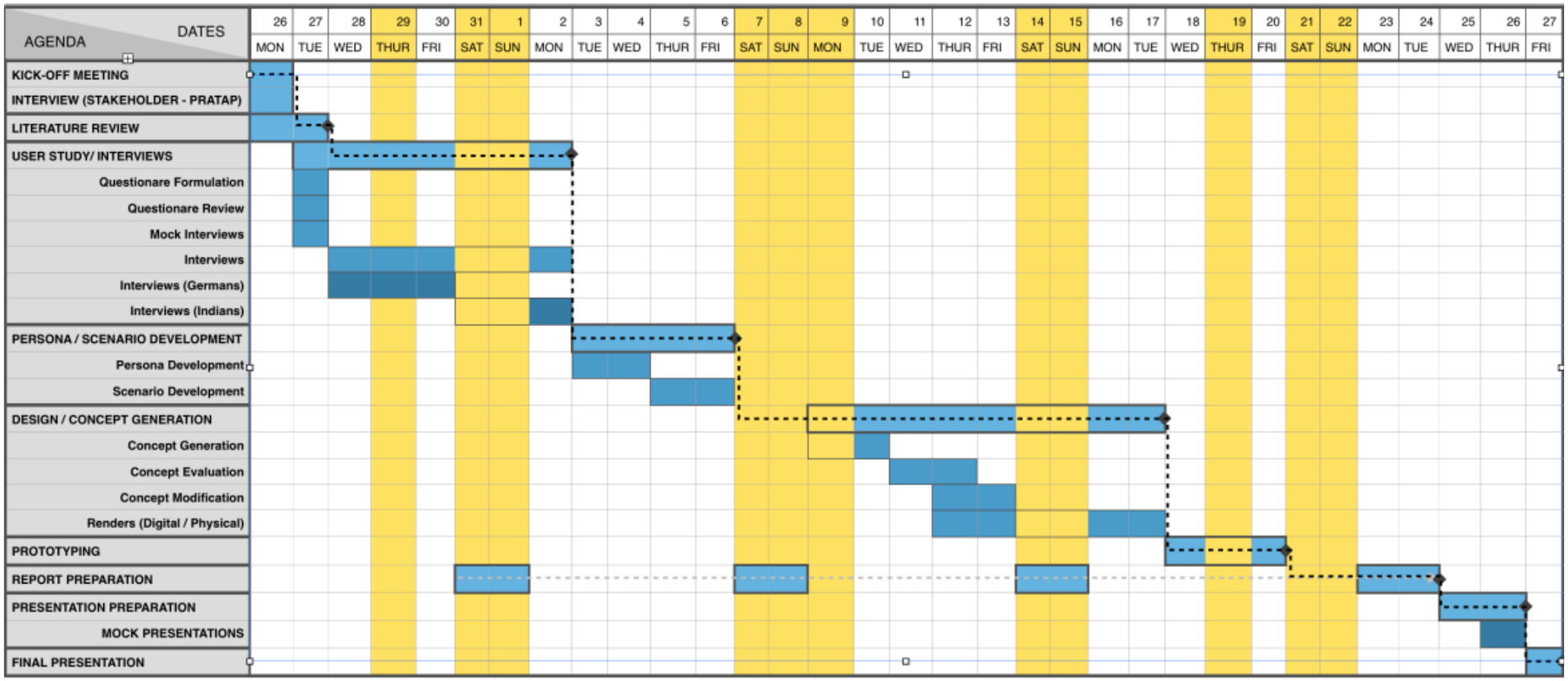
http://www.gillette.com/vector/en-IN/assets/images/vector/vector.png seen on 26.04.14

Design Brief

- Vehicle instrument cluster for B+ segment car (Kleinwagen)
- One Indian and one German design
- For students who can buy a 2nd car
- Consideration of cultural differences
- No specified design restrictions
- Fits needs of personas
- No head-up display and touchpad
- No expert consulting(due to time)
- Only basic literature review
- Instruments included: Speedo-,Tacho-,Odometer, Fuel indicator, Blinkers, Head light-, Seatbelt-, Door check, Cooling temperature

Project Management methods used



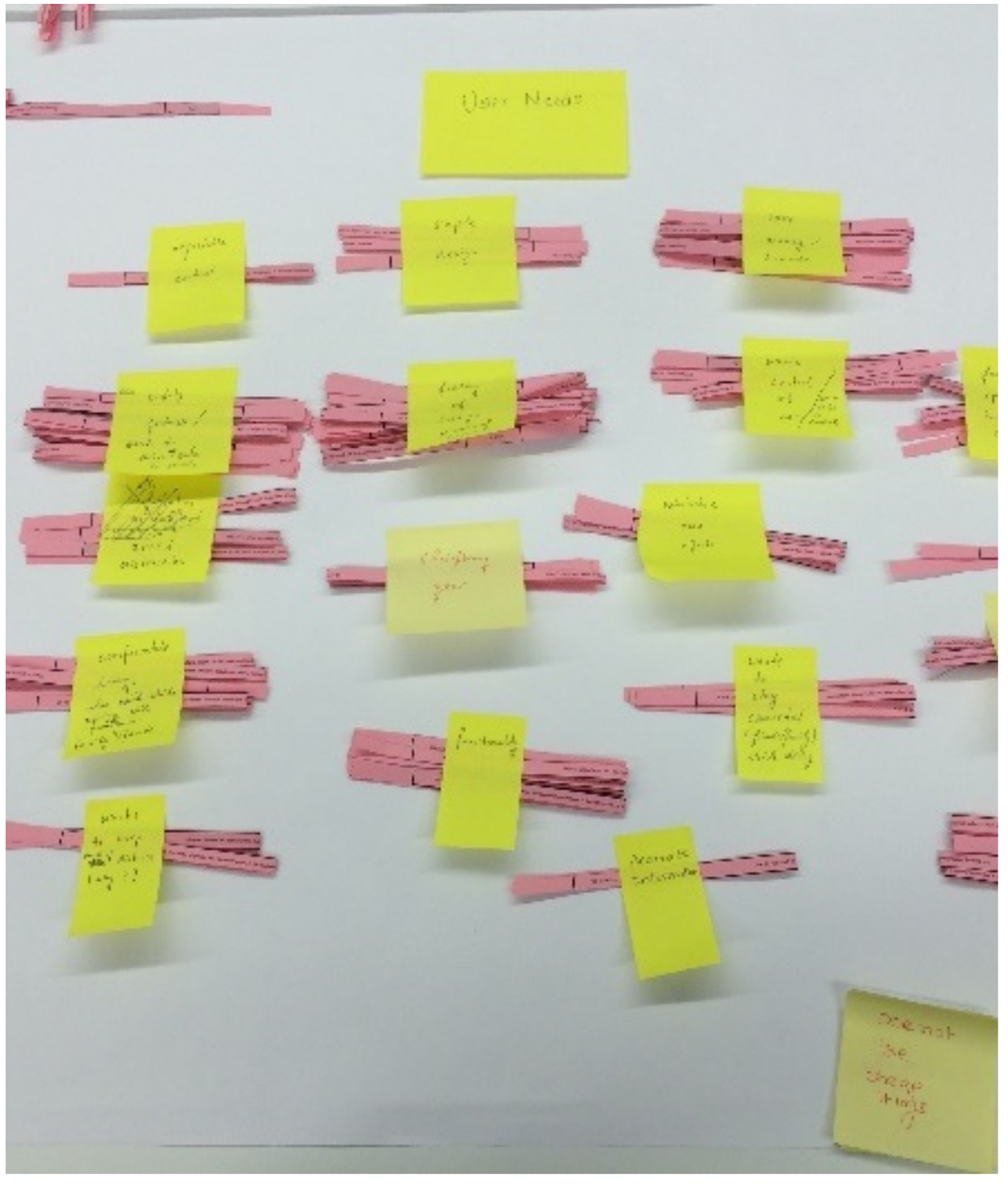


Tasks	Competencies	Kalyani	Tobias	Baisam	Christian
Stakeholder Interview	process and necessary data overview				
Project Management	project management methods				
Literature Review	none				
Questionnaire	necessary persona information				
Interviews	interviewing skills				
Persona Development	persona development process				
Scenario Development	scenario development process				
Concept Generation, Evaluation, Modification	knowledge of dashboard design				
	design skills				
	graphic programs for design				
prototyping	prototyping methods				
report	English academic writing				
presentation	preparation				
	presenting				

User Study

- User Interviews
  - Contextual Enquiry
    - 6 German users
    - 6 Indian users

- Affinity Mapping
  - Bottom Up approach
  - Make observations
  - Get insights



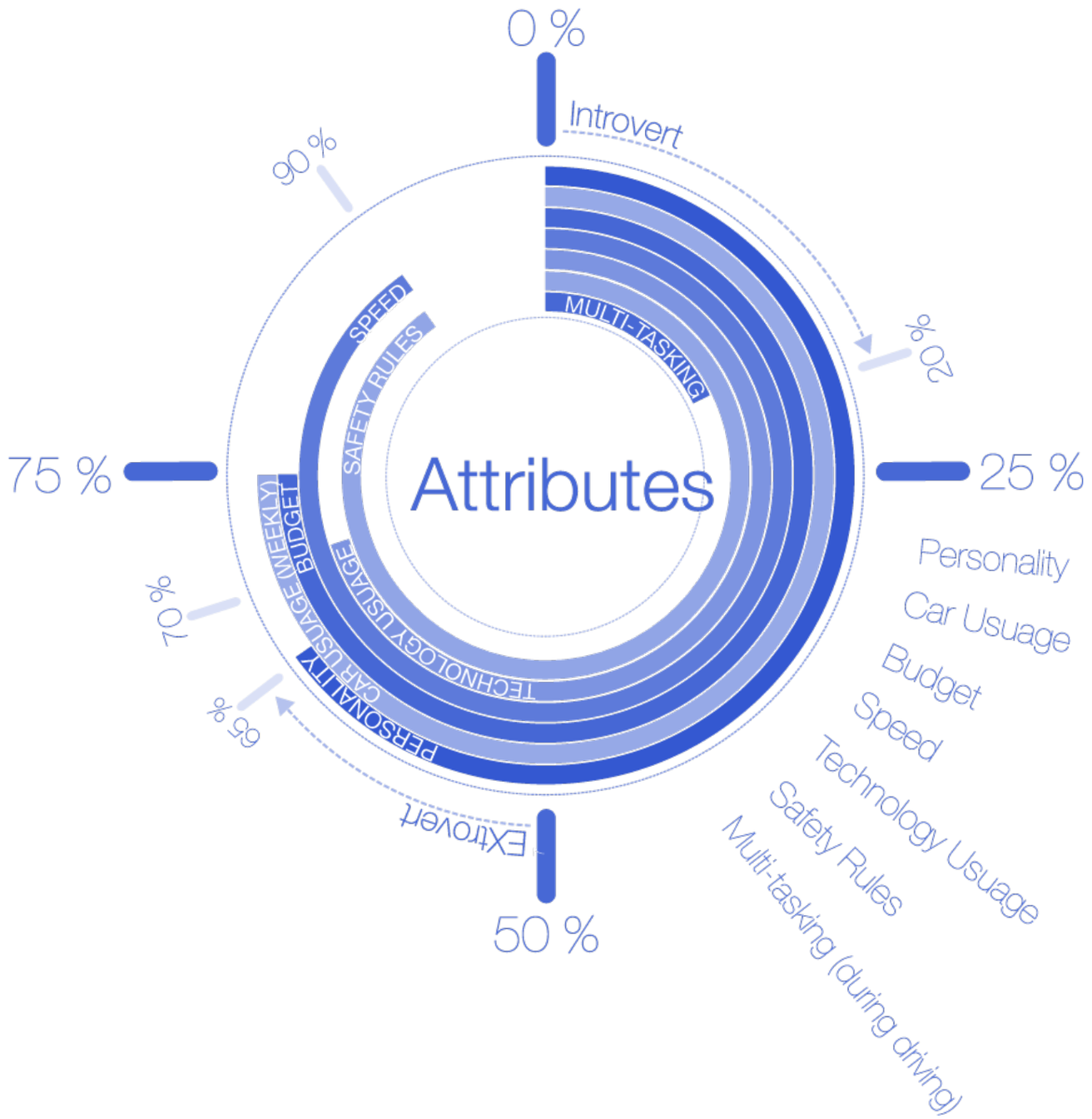
Persona: German

Felix Schmidt

- Age 24, Student
- Likes Gym, sports
- Likes branded things, likes quality
- Uses social media only when needed
- Updated about technology
- Experienced in driving
- Likes speed
- Follows all rules while driving
- Likes functionality and quality

User Needs

Function	High Quality
Balanced Design	Ease of cleaning
Feeling of control	Luxury
Safety	Feeling of Speed



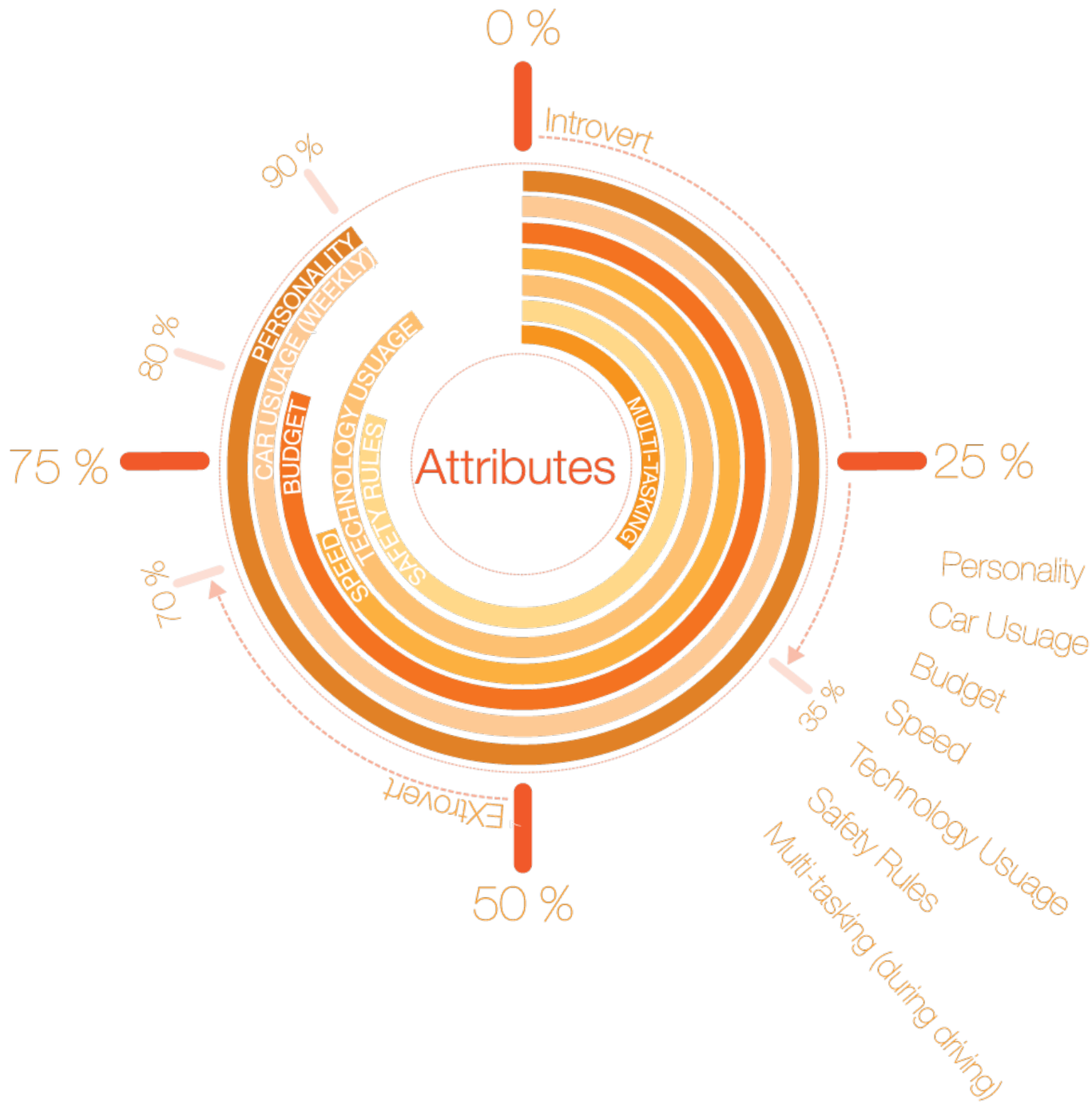
Persona: Indian

Rahul Sharma

- Age 24, Student
- Likes Games, sports, travelling
- Tech- Savy likes social media
- Hangs out with friends on weekend
- Experienced in driving
- Likes speed
- Follows all rules while driving when someone is there
- Likes functionality and quality
- Avoids traffic and trouble while driving

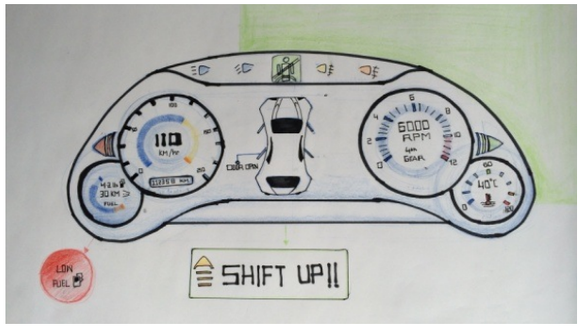
User Needs

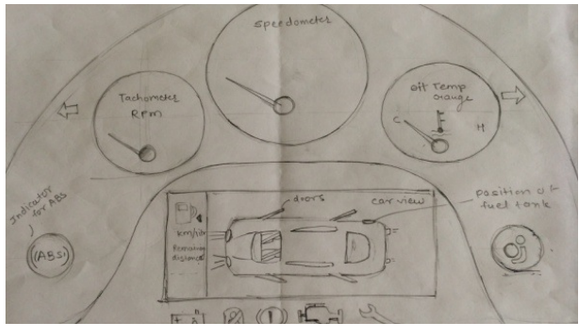
Function	Save fuel / money
Simple Design	Display Information
Feeling of control	Luxury
Safety	Feeling of Speed



Ideation

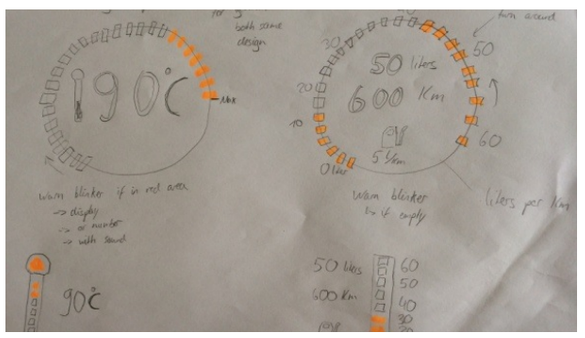
- Different German and Indian designs
- Evaluation based on user needs
- Combination of best ideas

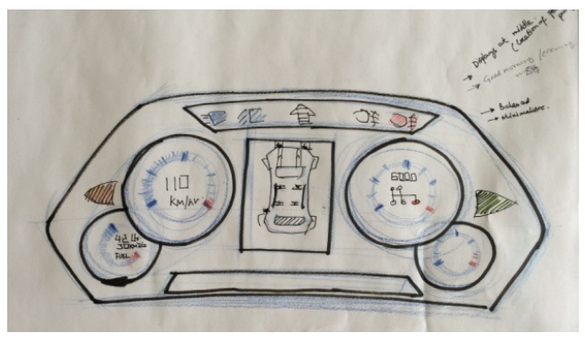


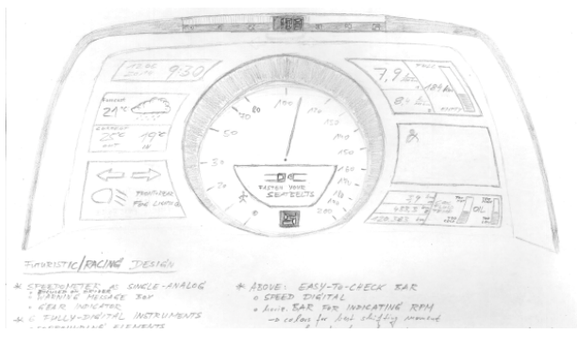


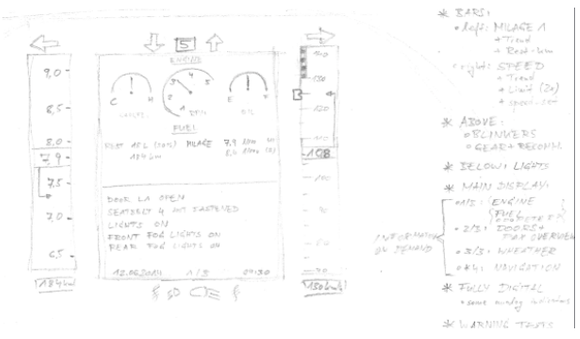
Points considered while ideation

- Safety
- Feel of Speed / Acceleration and Accuracy
- Economical Driving
- Alignment and Grouping
- Visualisation

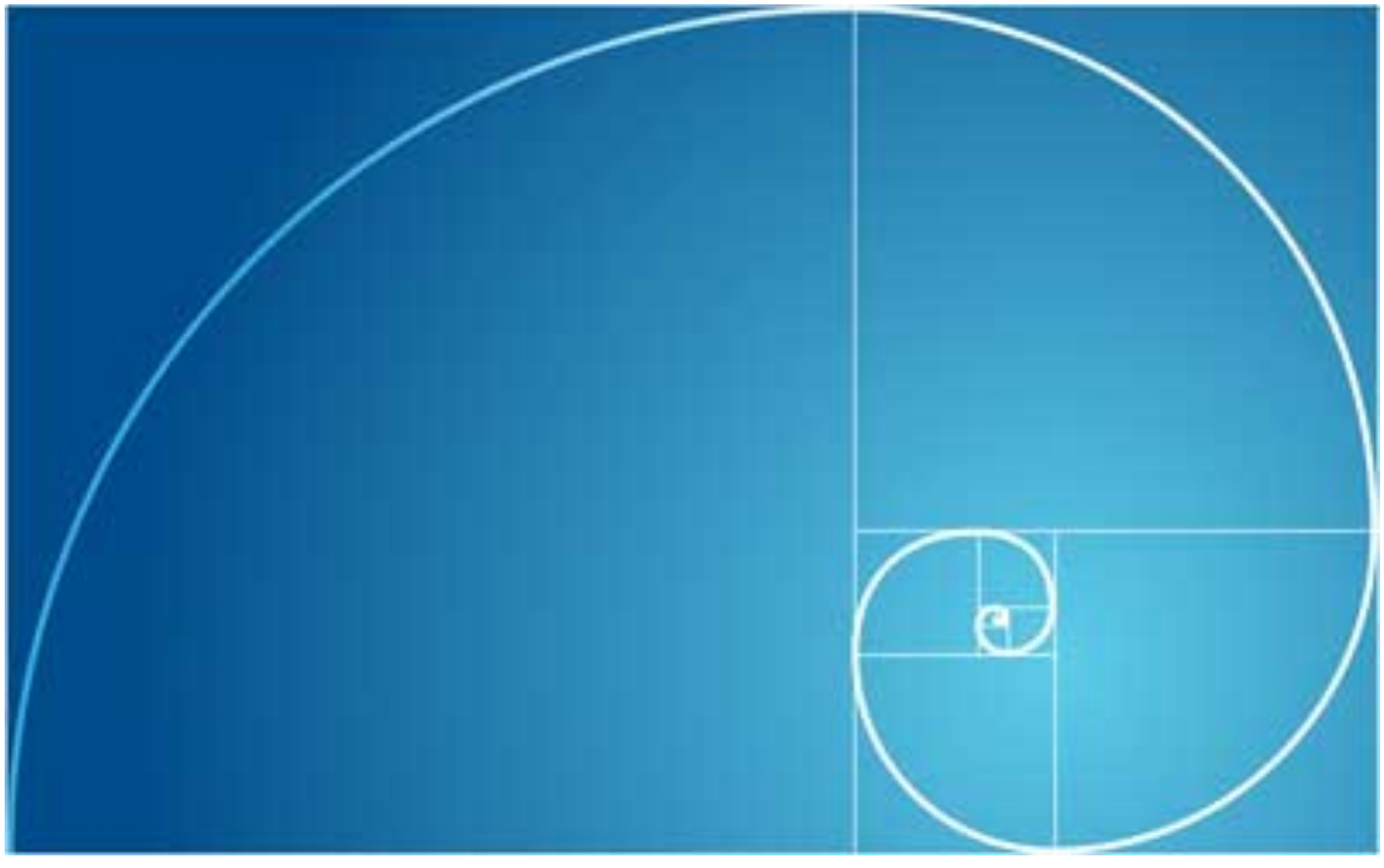






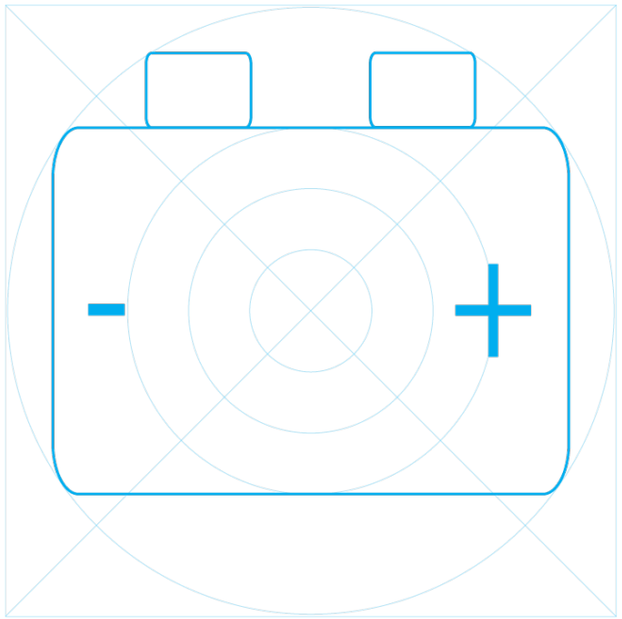


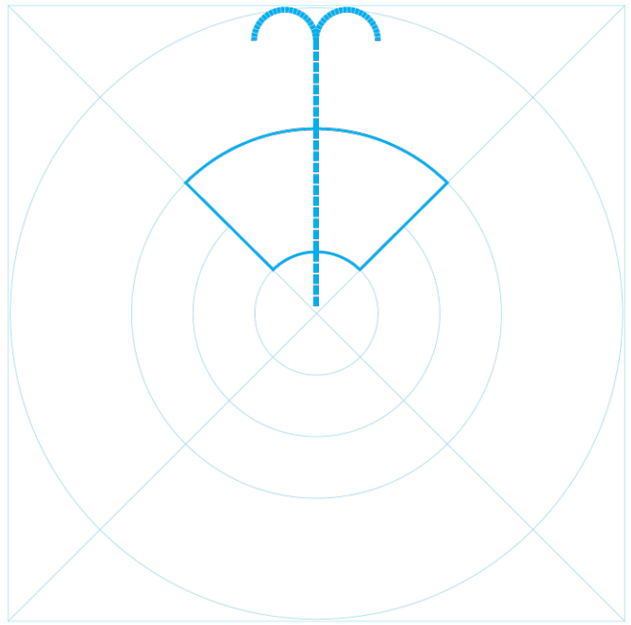
Design Methodology

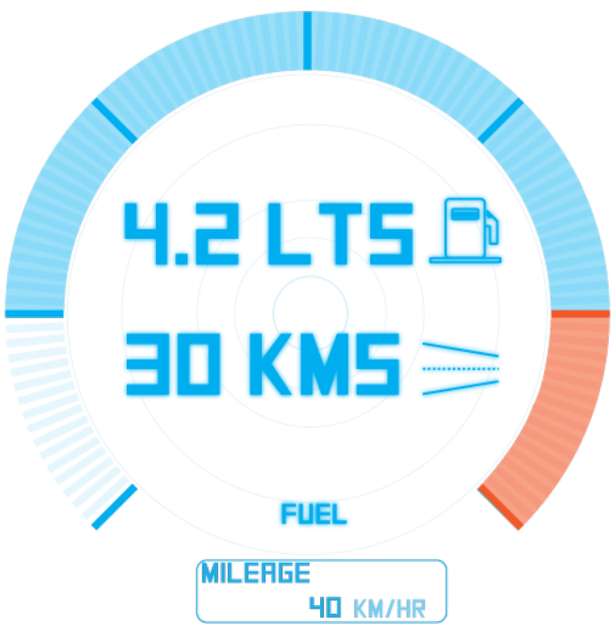


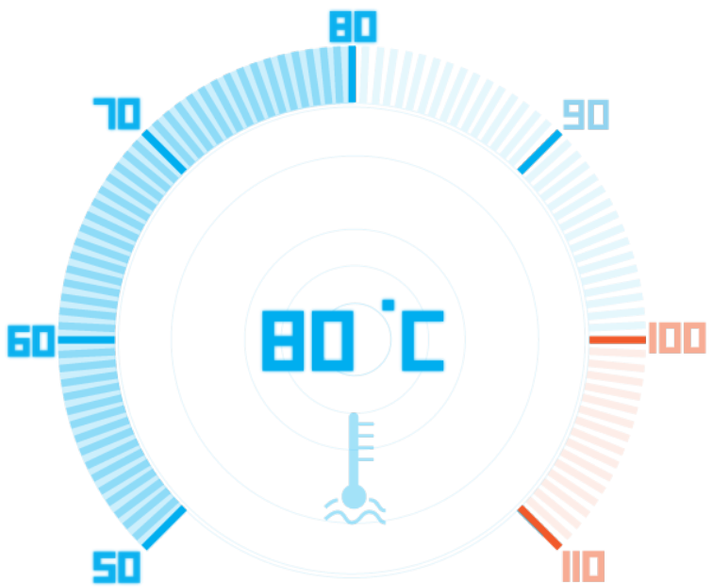
http://science.howstuffworks.com/math-concepts/fibonacci-nature1.htm 24.06.14

Elements of Instrument Cluster



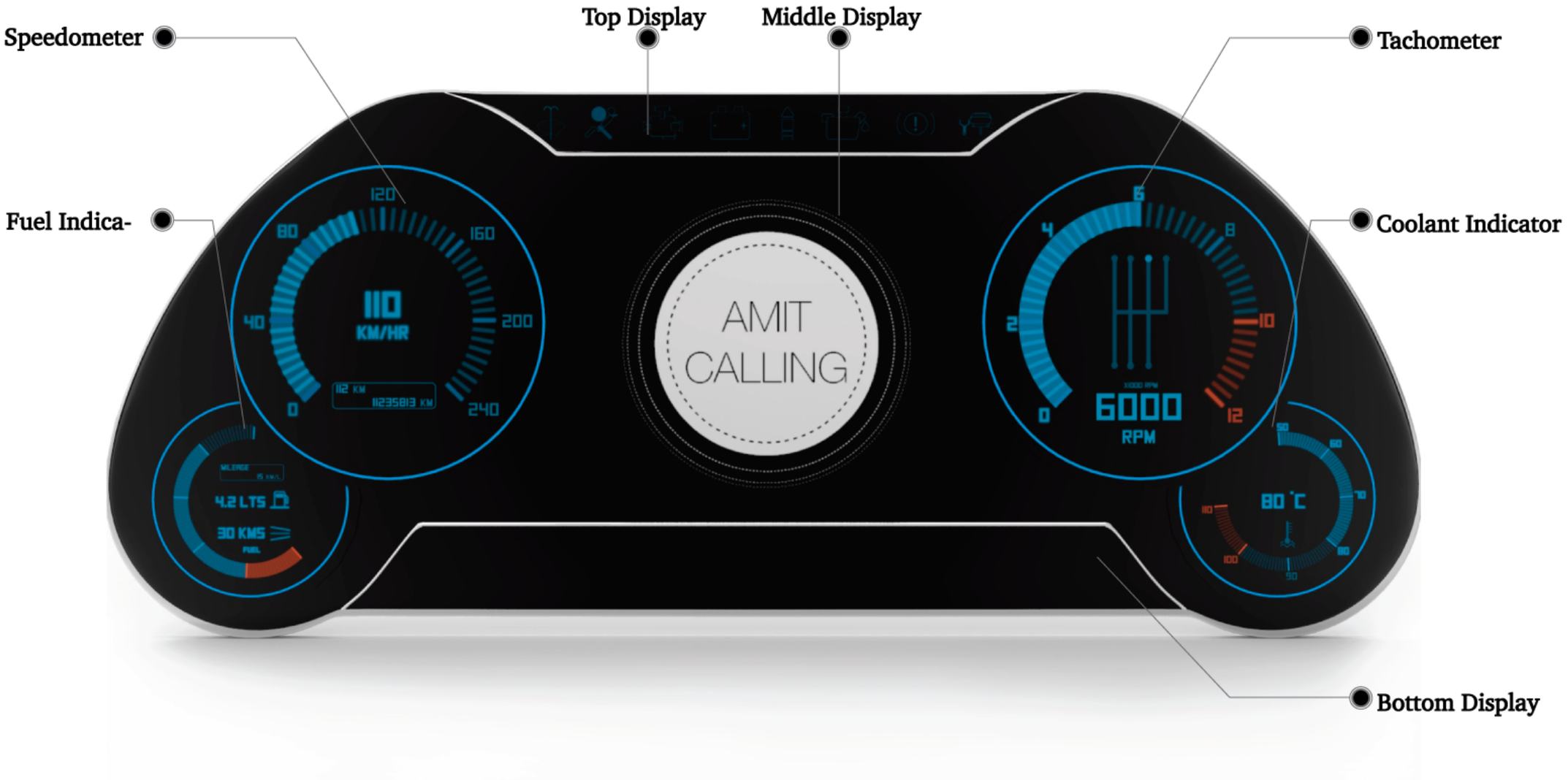






Final Design: German

Final Design: Indian



Scenario

- Dashboard welcomes you

Scenario

- Displays potential warnings

Scenario

- Car is on low fuel

Scenario

- Car is on low fuel

Scenario

- Shift the gear

Scenario

- Someone is calling

Scenario

- When some obstacle is ahead of the car

3D Visualisation

3D Visualisation

Learnings

- Task:
  - Importance of understanding cultural differences

- Project Management
  - Project definition
  - Efficient and structured approach:
    - Competency matrix, project structure, Gantt chart

- User Centred Design Process
  - Intercultural interviews, affinity mapping, personas, scenarios

- Perception Studies
  - Difference in perception
  - Repertory Grid technique, Semantic Differential Method, Card Sorting, Morphological box

Any Questions ?