RACE2050 *- Responsible innovation Agenda for*
Competitive European transport industries up to 2050

M012 - Minutes of RACE2050 scenario workshop in Berlin

November 13, 2013, Berlin

Agenda

1. Welcome
2. Presentation of RACE2050 research outlines
3. Presentation of methodological approach
4. Presentation of parameter selection relevant for scenario development
5. Presentation of RACE2050's scenario prototypes for 2030 and 2050
6. First insights into RACE2050's "Synopsis Tool" concept

Wednesday 13th November 2013 13:00 – 17:30
Venue: TU Berlin, Institut für Berufliche Bildung und Arbeitslehre, Marchstraße 23, 10587 Berlin

Meeting Participants:
Hans-Liudger Dienel (TU Berlin),
Robin Kellermann (TU Berlin),
Anna-Sophie Liebender (TU Berlin)
Karl-Heinz Steinmüller (Z-Punkt Berlin)
Friedemann Kunst (Senatsverwaltung für Stadtentwicklung und Umwelt Berlin)
Andreas Manthey (Expert for electro mobility)
Roman Peperhove (Historian and futurist, FU Berlin)
Marc Weider (InnoZ Berlin)
Ingo Kollosche (TU Berlin)
Thomas Waschke (strategy consultant for new mobility systems)

Chair: Tom Ritchey Minutes: Robin Kellermann, Anna-Sophie Liebender

1. Welcome

Dienel welcomes the participants at 1pm, thanks for accepting the invitation and presents the major research objectives of RACE2050.

2. Presentation of RACE2050 research outlines

The FP7-funded project aims to establish a meta-analysis of existing future studies for the European transport industry in order to identify key success factors for a sustainable and socially accepted growth of the European transport industry. Therefore the research project will set up a Synopsis which shall enable a comparison between about 100 recent future studies of all relevant transport segments. Furthermore RACE2050 will generate two normative scenarios, which will be, for didactic reasons, a "black" one for 2030 and a "pink" one for 2050.
After briefly introducing the participants to different scenario concepts (Cassandra scenarios vs. positive visions and "Leitbilder"), **Dienel** presents the historical dimension of RACE2050's future study by claiming the historical evolution of the European transport industry to be also a product of continuing threat and horror scenarios. Against this background, the project to some extent follows the approach of setting up new threat scenarios, as those negative scenarios obviously accelerated economic and political adaptation processes to eventually let the European transport industry today become the strongest in the world. This new threat scenario could be a European "inner enemy" rather than a new geopolitical threat of some region's economic predominance. Thus, Dienel asks which vision could be the new "paradise vision" Europe should focus on?

Kellermann provides additional information about RACE2050's research road map and specifies the historical dimension of the project. Regarding the European transport industry's evolution as a constant reaction to threat scenarios, RACE2050 concentrates on three threat periods:

- The „American threat" (1960s): American efficiency and industry size (scale effects)
- The „Japanese threat" (1980s): Japanese efficiency („lean production")
- The „Chinese threat" (since 1990s): Offshoring, low labour costs, globalization

RACE2050's own scenario making process shall create policy advices and recommendations that encompass core concepts for a sustainable and competitive European transport industry. Following the idea of the German artist Joseph Beuys, those normative and exaggerated (but credible) scenarios shall create a future we want, otherwise we would get a future we don't want. They shall act as warning calls, inducing to act and influence the present.

Participants introduce each other, afterwards moderator Tom Ritchey from Sweden provides the meeting's road map and objectives.

3. Presentation of methodological approach

Ritchey presents a historical abstract of the evolution of future studies in order to frame the project's methodology of "General Morphological Analysis" (GMA). This method, established in the 1990s, allows to generate a multitude of scenarios with the help of computer-aided modelling in a morphological box. As RACE2050 is dealing with a highly complex problem field and envisions long-term planning, GMA is most feasible for setting up a traceable, transparent and internally consistent "problem landscape".

4. Presentation of parameter selection relevant for scenario development

In order to frame the "problem landscape", Ritchey presents the project's 15 preliminary parameters that will define the system. As the project is entering the second half of its lifetime, those parameters are not written in stone but are continuously checked for consistency, credibility and impact by expert workshops and recent scenario analysis.

The 15 preliminary parameters are:

Environmental issues and policies
Energy and raw resources price
Geo-political landscape
Infrastructure condition
R&D background
State of European integration
Business awareness
Technology preparedness
Trade condition
Financial environment
Urbanisation and demographic
Globalised products and services
ICT development
Value chain breadth and international scope
Market size

Participants discuss parameter selection and give their remarks:

Steinmüller strongly recommends to provide clearer definitions and clear geographical scope for parameters in order to provide a common understanding for each of the parameters. Furthermore he recommends to differentiate external and internal European factors and particularly urges to clarify parameter "Value chain breadth and international scope". Finally Steinmüller recommends to "map" parameters in an illustrative way, e.g. by putting the term "European competitiveness" in the center and grouping external and internal parameters around it.

Kunst recommends to differentiate parameter "Geopolitical landscape" from "State of European integration" and to generally differentiate internal parameters and external parameters (economic outer-European context and inner-European context). Additionally, Kunst recommends to add a parameter of "Regulatory framework" that could replace parameter "Trade conditions", as well as parameters "Cost of labour" or "Number of skilled wokforce".

Dienel recommends to add an icon or a picture to each of the parameters in order to make clearer their meaning and also to achieve an aesthetic consistency. Furthermore he proposes to reframe the parameters in three different groups:

Regulatory • Regulatory framework • European integration • Infrastructural condition	Technology • ICT • R&D • Value chain breadth
Framework conditions • Demography • Globalization • Energy and resources price	People • Technology preparedness • Business preparedness • Mobility preparedness

Parameters should be conceded to change over time and should be revised continuously.

Participants generally recommend to establish more self-explanatory terms:
Proposed revision/clarification of “business awareness”, “technological preparedness”, “market size” (geographical scope?). Additionally, the parameter selection procedure needs to be transparent: How parameters were chosen? How future studies were assessed according to parameters? Which kind of studies were assessed with the help of such parameters (industrial, open to public or internal studies etc.?).

5. Presentation of RACE2050’s scenario prototypes for 2030 and 2050

Kellermann presents drafts of RACE2050’s prototype scenarios 2030 and 2050.

Kunst declares the “black” 2030 scenario to be non-credible, as the period until 2030 would be too close to let this scenario really happen (16 years are not enough). He therefore proposes an “intermediate step” scenario. Beyond that, 2030 would be too dramatic and both scenarios would focus too much on “old” growth-approaches. They would lack a real innovative understanding, a new paradigm of the future of mobility. The “pink” 2050 scenario should therefore invent a new sense of mobility. Additionally, there might be slight overestimation of the “energy price” parameter, which might turn out to be a “common-sense parameter”, leading to no new insights.

Steinmüller argues that the scenarios would not yet make exactly clear where Europe wants to arrive. He recommends to let scenarios be surprising and plausible at the same time and reminds the problematic aspect that narrative scenarios always tend to project causalities, which can lead to inconsistency. Additionally, he proposes to include winners & losers of the respective time frames. Beyond that, Steinmüller criticizes the inconsistency of on the one hand assessing scenarios with 15 “hard” framework parameters, but suddenly including behavioral and attitudinal aspects in the 2030 and 2050 narratives.

Waschke comments the lacking relevance of ICT, which he considers underrepresented in all scenarios. Beyond that, he emphasizes to include Wild Cards into the scenarios.

Participants recommend to generate not a single, but a couple of different black and different pink scenarios that focus on one specific aspect each. The current scenarios would be too dense and would contain too many information.

Participants in general appreciated the didactic approach, the focus on declining public infrastructure investments as well as the term of resulting 'corridorisation'. All speakers, however, urge to better clarify the industry's lacking ability to adapt to new mobility and framework conditions (for the black scenario). That means also to clarify the conceptual "way to 2050" and to elaborate all potential ways how to arrive at 2050; "directly" or through "serial development".

Ritchey asks participants about other black scenario aspects.

- **Manthey** proposes the cost of 500€ per barrel
- **Kunst** proposes the lack of working skills and abilities (applying for all industry segments and also affecting transport industry)
- **Kollosche** proposes the deterioration of infrastructures (rail& road) due to declining public investments
- **Waschke** proposes the danger of over-regulation

6. First insights into RACE2050's "Synopsis Tool" concept

Kellermann presents first draft of online scenario platform ("Synopsis Tool") that is scheduled to be operating by April 2014. Participants briefly discuss conceptual aspects, illustrations and limitations and declare appreciation of setting up such a meta-analysis tool. Participants, again, declare at this point the necessity of clearly defining the parameters in order to ensure a valuable data-input of new scenarios. **Kollosche** recommends to maybe think over the open Wikipedia-approach.

Dienel, **Kellermann** and **Liebender** thank the participants for coming and commenting and close the meeting at 5.30 pm.

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