Minutes of the Hamburg Intake Workshop

Date: 7 and 8 November 2013
Location: Wälderhaus, Am Inselpark 19, 21109 Hamburg, Germany

Item 1 Welcome address, *Hans Gabanyi*, Head of the office for the protection of nature and resources

The involvement of stakeholders from the beginning on is very important to the city. It allows for the integration of their ideas and for better judgement and evaluation of how they influence processes. The goal and underlying reason of the workshop are not only best practice, but also governance. This requires the development of target systems which should be integrated into planning. The Intake workshop looks at mobility, accommodation, and energy networks and deals with programmes and plans which have already been discussed and concluded, and programmes and plans which are being worked on. The city is however always in centre focus.

Item 2 Introduction Transform – background, topics, methodology, Dr *Ulf Skirke, City Coordinator Transform*

Explanations

At the core of the entire transform project is the intelligent and climate-friendly design of cities. Copenhagen, Vienna, Amsterdam, Lyon, and Genova are partaking in this process with Hamburg. Hamburg's participation is based on the IBA[1]-Wilhelmsburg fundamental principles and the Climate Protection Master Plan which formulates targets for 2050 and proceeds with the concrete measures of the 2020 action plan. In addition to these fundamental principles, the new Mobility Programme 2013 offers a further fundamental principle. As part of Transform, participating European cities and parts of the city are shown using an example and the effects of them on aspects such as overall city planning (approaches and implementation) right through to programme development and strategy development are assessed. The complete process is summarised using the transformation agenda. This should result first in the drafting of a guide offering steps, rules, and guidelines for planners, politicians, and experts and second, in the development of a simulation tool (prototype) for the potential of costs, benefits and optimisations.

Cities should take responsibility for their own organisation and press ahead with processes for improvement through commitments, strategies and synergy effects. The involvement of stakeholders and the analysis of their potential of influence and interests are of particular importance. In this setting

[1] International Architecture Exhibition (Internationale Bauausstellung)

the Intake workshop has an important function in the Transform process as an input tool for ideas and targets. For further explanations, see the presentation "Intake workshop Pres. Skirke."

Discussion

To what extent do results from the Intake Workshop run into further planning in Hamburg?

The goal and background of the Intake Workshop is the analysis of weaknesses, strengths, opportunities and threats and the comparison of them against factors such as politics, governance, environment, space and social issues. This analysis should draw up options for action which influence the rest of the process and have a changing influence on the presuppositions and specifications.

Climate protection goals were reduced; a lot of criticism of the master plan: why does the city concern itself with EU planning and not with Hamburg?

Exchanging with other cities should primarily help to reach the 2050 goal. The focus is on the long term. In addition, the climate protection master plan is adjusted every two years and adapted to the 2050 target.

Why was the area Wilhelmsburg selected?

Renewable Wilhelmsburg = Transformation project --> climate neutral quarter by 2050.

Experience gained from the actions which have already begun serve as examples for integration into other areas in Hamburg.

Item 3 SWOT - Mobility, quarter development, energy networks

Working group 1: Mobility

After input by Dr. Tina Wagner (see attached presentation), a SWOT analysis was carried out by the working group participants. The following is a summary of the points prepared.

Strengths	Weaknesses
▪ Good public transport network ▪ Large bicycle network ▪ Integration of free space and bicycle ▪ Citizens commitment ▪ Free space connection system ▪ Hinterland connection (port/rail) ▪ Logistics site	▪ Overall traffic plan metropolitan region ▪ No clear definition of targets ▪ Planning based on demand ▪ Dividing responsibilities ▪ Bicycle network not modern ▪ Rail-bound public transport ▪ Authorities' human resources ▪ Integrated and interdisciplinary focus ▪ Use of parking spaces ▪ Usage competition of streets areas

	▪ Design focus space/passenger car traffic ▪ Illegal parking

Chancen	Threats
▪ Low Access costs ▪ New logistics concepts ▪ Pedestrian and bike, domestic economy benefits ▪ Pedestrian and bike, low-cost funding ▪ Innovative energies/technologies ▪ Inland ships ▪ Traffic management ▪ Stakeholder participation ▪ Changes in trends ▪ Electric mobility ▪ Prices of raw materials (increasing) ▪ Affordable mobility ▪ Tolls ▪ EU targets ▪ Political frameworks ▪ Decoupling of resources	▪ EU targets- economic effects ▪ Public services ▪ Rebound effect ▪ Finances ▪ Public opinion/media ▪ Personal surface use ▪ Lifestyles ▪ Logistics site ▪ Prognosis goods traffic ▪ Demographic trends ▪ Competition within environment association ▪ Decoupling of resources

Working group 2: Quarter development

After input by Frank Karthaus (see attached presentation) the working group participants carried out a SWOT analysis. The following is a summary of the points prepared.

Strenghs	Weaknesses
▪ Politically-strategic frameworks ▪ Public relations and clarification ▪ Timing of the energy concept ▪ Frameworks and main points of actions ▪ BSU adjustment concepts possible ▪ Definition of target scenarios ▪ Successful object support ▪ Integrated planning ▪ Integrated budget development and resources	▪ Selection of quarter criteria ▪ Spatial arrangement ▪ Quarter development conditions ▪ Difficult governance structures ▪ Lack of integration of mobility and green areas ▪ Less resource provision ▪ Integrated planning ▪ No active quarter development ▪ Lack of resources (financial and human)

▪ Selection of quarter criteria ▪ Mix of benefits ▪ Solutions in the quarter ▪ Densities and volumes	▪ Development funds underused ▪ Lack of exchange by projects ▪ Lucrative charters selected, what about the others? ▪ Select quarters carefully, only regarding space

Opportunities	Threats
▪ Acceptance ▪ Feeling with the people – area senator ▪ From object to surfaces to quarter ▪ Participation process as a whole, in the quarter ▪ Involvement of the port - synergies ▪ Involve civil society ▪ Mix of usage ▪ Evaluation and monitoring ▪ Inclusion of stakeholders ▪ Agreement effectiveness	▪ Listed buildings ▪ Dependency on large suppliers ▪ Inactive organisations ▪ Lack of investor interest ▪ Climate protection requires individual changes in behaviour ▪ Reforestation is token action ▪ Political changes ▪ Reconstruction ▪ Debt brake ▪ Passing the buck to the area ▪ Low participation of stakeholders ▪ Only plans ▪ Low data basis ▪ Quarter-specific resolutions required ▪ Landlords not playing along

Working group 3: Energy networks

After Detlef Moltmann provides input (see attached presentation) the working group participants carried out a SWOT analysis. The following are the points prepared in summary form.

Strengths	Weaknesses
▪ Geographical location and metropolitan region ▪ Geographical location and wind energy ▪ A+++ ranking ▪ Combination city/country ▪ IBA and follow-on projects ▪ Metcalfe's law/economies of scale: the larger the network, the greater the benefit per head ▪ Cluster EE companies ▪ Population density	▪ Existing insulation ▪ No energy plan yet ▪ Authorities loss of skills ▪ Political communication HH-SH, HH-NDS ▪ Unawareness of network conditions ▪ Lack of citizen involvement ▪ Public behaviour resulting in energy saving ▪ Wind energy – adverse wind residents

▪ The desire to be the best ▪ Powerful skilled craft and trade workshops for the purpose of decentralisation (network-related) ▪ Potential for deep geothermal energy ▪ District heating grid ▪ Expert companies – authorities	▪ Relatively little generator capacities EE in Hamburg ▪ Lack of legislative frameworks ▪ Interests of large players ▪ Non-transparent procedures ▪ Tendering procedures prevent quality competition (life cycle costs) ▪ lanning authorities versus parliament

Opportunities	Threats
▪ Innovation and market participation ▪ Geographical location wind energy ▪ Synergy: Electricity, water, gas, heating ▪ Influence on German national politics ▪ Potential for deep geothermal energy ▪ District heating grid ▪ EE assistance in the form of transmission tariffs ▪ Transparency laws ▪ Expertise companies – authorities ▪ City workshop ▪ Merging of skills ▪ Improved response by industries ▪ Cultural shift (participation) ▪ Capacities for research ▪ Heating consumers ▪ A lot of private money ▪ Bundling of interests	▪ Solar limitations ▪ Energy saving by the public ▪ Wind energy - adverse wind residence ▪ Relatively few generator capacities EE in Hamburg ▪ Political trends ▪ Interests of large players ▪ Mainstreaming ▪ Legal circumstances are too complex ▪ Smart Grid (open development) ▪ Complicated for end users ▪ Energy conversion also a social question ▪ EEG (Renewable Energy Law) ▪ Uncertainty in energy politics (GER/EU/global) ▪ Costs for investment ▪ Gas prices ▪ AfA (tax deduction of investments) – Amortisation revents long-term investment

Item 4 PESTLEGS Analysis

The points compiled on the topics of Mobility, Charter development and Energy Networks underwent the PESTLEGS analysis. This analysis instrument filters results of the SWOT analysis according to the criteria; politics, economy, social, technology, legislation, environment, governance and space. The following matrix was the basis:

Topic					
	Question	Strengths	Weaknesses	Opportunities	Threats
Politics	Do the topic points receive political support?				
Economy	From an economic point of view, do the topics make sense? Can they be implemented?				
Social	Are the topics socially accepted (public)?				
Technology	From a technical point of view, can the topics be implemented?				
Legislation	Are the topics in keeping with current legislation? Are there any legal obstacles?				
Umwelt	Do the topics affect ▪ Reduction in demand ▪ Energy efficiency ▪ Renewable energies ▪ CO2 reduction				
Governance	Are all relevant stakeholders involved in planning processes?				
Space	Are spatial aspects also considered within the topics?				

PESTLEGS Mobility:

	Strengths	Weaknesses	Opportunities	Threats
Politics	▪ Large public transport network ▪ Free space connection system ▪ Logistics site ▪ Port (hinterland rail)	▪ Rail-bound public transport ▪ Unmodernised bicycle network ▪ Too much car-friendly city and use competition ▪ Clear definition of target ▪ HR ▪ Overall traffic design (metropolitan region) ▪ Division of responsibilities ▪ Planning is demand oriented ▪ Parking space ▪ Integrated and interdisciplinary direction	▪ Affordable mobility ▪ Tolls	▪ Competition in the environment associations ▪ Public opinion ▪ Prognosis freight transport ▪ Finances
Economy	▪ Logistics site ▪ Port (hinterland rail)	▪ Too much car-friendly city and use competition	▪ Pedestrian and cycle paths (domestic economy benefits)	▪ Competition in the environment associations

			▪ Pedestrian and cycle paths (low-cost funding) ▪ Tolls ▪ Increasing price of raw materials ▪ Inland ships ▪ New logistics plans	▪ Public opinion ▪ Prognosis freight transport ▪ Finances
Social	▪ Free space connection system	▪ Too much car-friendly city and use competition	▪ Affordable mobility ▪ Pedestrian and cycle paths (domestic economy benefits) ▪ Changes in trends	▪ Personal land consumption / lifestyle ▪ Public opinion ▪ Finances ▪ Demographic trends
Technology		▪ Too much car-friendly city and use competition	▪ Low Access Costs ▪ Innovative E&T ▪ Traffic management ▪ Decoupling of resources ▪ Rebound effect ▪ Electromobility ▪ New logistics plans	▪ Finances
Legislation		▪ Too much car-friendly city and use competition	▪ New logistics plans	▪ Finances
Environment	▪ Large public transport network ▪ Free space connection system	▪ Unmodernised bicycle network ▪ Too much car-friendly city and use competition	▪ Affordable mobility ▪ Pedestrian and cycle paths (domestic economy benefits) ▪ Pedestrian and cycle paths (affordable financing) ▪ Personal land consumption/ lifestyle ▪ Changes in trends ▪ Traffic management ▪ Electromobility ▪ EU targets	▪ Personal land consumption/ lifestyle ▪ Logistics location ▪ Finances
Governance	▪ Commitment of citizens	▪ Unmodernised bicycle network ▪ Too much car-friendly city and use competition ▪ Division of responsibilities ▪ Clear definition of target ▪ HR ▪ Overall traffic design (metropolitan region) ▪ Division of responsibilities	▪ Traffic management ▪ Stakeholders participation	▪ Finances

		▪ Planning is demand oriented ▪ Parking space ▪ Integrated and interdisciplinary direction		
Space	▪ Large public transport network ▪ Large cycling path network ▪ Free space connection system ▪ Logistics location	▪ Rail-bound public transport ▪ Unmodernised bicycle network ▪ Too much car-friendly city and use competition ▪ Overall traffic design (metropolitan region)	▪ Personal land consumption/ lifestyle ▪ Stakeholders participation	▪ Public services ▪ Personal land consumption /lifestyle ▪ Logistics site ▪ Finances ▪ Demographic trends

PESTLEGS quarter development:

	Strengths	Weacknesses	Threats
Politics		▪ Identified a high level of potential for weakness ▪ No active quarter development ▪ No clear targets and definitions	
Governance	▪ Stakeholders, citizens	▪ Identified a high level of potential for weakness	▪ Low participation of stakeholders ▪ Opposing factors
Space	▪ Best Solution ▪ Quarter selection ▪ From object to surface to quarter		

PESTLEGS energy networks:

	Weacknesses	Threats
Politics	High ranking in SWOT Filter	High ranking in SWOT Filter
Economy	Middle ranking in SWOT Filter	Middle ranking in SWOT Filter
Social	Low ranking in SWOT Filter	Low ranking in SWOT Filter
Technology	Middle ranking in SWOT Filter	Middle ranking in SWOT Filter
Legislation	Low ranking in SWOT Filter	Low ranking in SWOT Filter
Environment	Middle ranking in SWOT Filter	Middle ranking in SWOT Filter
Governance	High ranking in SWOT Filter	High ranking in SWOT Filter
Space	Low ranking in SWOT Filter	Low ranking in SWOT Filter

Item 5 Presentation of results

The results from the SWOT and PESTLEGS working groups were presented in the form of a talk round.

SWOT talks results:

Strengths Energy Networks:

The main focus is on capturing energy and energy networks and determining the complexity. Identification and clarification of internal and external factors is target-aimed. There is positive feedback on the topic and its progress. The constellation of the teams and involvement of stakeholders are consistently considered good and necessary. The use of synergy effects is described as the greatest opportunity in the area of energy and as key. It does however involve a lengthy and complex process and requires the involvement of all parties in order to achieve successful implementation. Governance and politics pose the greatest weaknesses and threats. The strong civil society can be described as a special factor in Hamburg.

Weaknesses Quarter Development:

The biggest problem recorded in terms of city quarters is the lack of a clear plan. Involvement of stakeholders is also essential in this regard; any opposing or influencing factors must be worked out. In particular, people and the living environment as a whole must be taken into account.

Threats/Opportunities Mobility:

Land consumption by individual lifestyles is considered a threat for mobility development. Prognosis for freight traffic indicates an unstable variable. The logistics site Hamburg and the port, identified as strengths for Hamburg can equally be deemed a threat due to additional mobility demands. Opportunities for Hamburg however are arising from new logistics plans, low access costs and inland ships. Trends and the factor quality of life support sustainable mobility development.

Things in common:

Stakeholder involvement seems to indicate a core point in all topics. The urgency of integrated and interdisciplinary planning and the design of processes with an involvement of stakeholders is a central concern to each topic.

PESTLEGS talks results

Mobility:

Governance and politics are worked out as core problems with regard to the topic of mobility because these are the areas where the greatest weaknesses and threats are identified. The solutions

determined are the development of clearer definitions of targets in traffic development planning by the senate, the integrated and interdisciplinary orientation in planning and processes, and citizen and stakeholder participation. However, a differentiation should be made between the participation methods. In the long term, division of the administration should be lifted. In sum, target-oriented agenda setting and the improvement of planning processes are required to allow for a guarantee of an overall transformation process.

Quarter Development:

The quarters also determine politics and governance as critical factors and emphasise that the first public plans and implementations (quarter selection in accordance with "Best solution") have been publicly effective and result in a positive response. However, ongoing commitment of politics and administration and clear guidelines are lacking. The solution mentioned is the compilation of targets for quarter development and the drawing up of definitions/criteria for quarter selection. Lifting division of administration and improved consultation between quarters and authorities is a core point which would be a valuable starting point for positive quarter development. Long-term implementation can be managed by integrating so-called ‘caretakers’. One further core point is the spatial reference in the quarter and how different aspects of the quarters (different quarters, surfaces and surface availability) are evaluated. Improved participation and integration of citizens and stakeholders is also essential in terms of quarter development to ensure sustainable quarter development.

Energy Networks:

During the PESTLEGS analysis the energy networks working group conclude that governance and politics are ranked highest in the overall view in the SWOT filter and therefore indicate the greatest influencing factors. Therefore, a clear and detailed governance plan should be prepared which offers a relevant political framework. The involvement of stakeholders is also essential for a further update of the climate protection master plan. Repurchasing the networks provides a great opportunity to improve the future design of networks and energy supply. Updating the climate protection master plan is considered a rolling planning and action process and requires a strong integrative process.

Item 6 Report from the Transform Cities

Amsterdam, *Stef le Fèvre*

Topics/aspects:

- Core topic is "Stickiness"
- similarities to HH - strong civil society (Bottom up) - huge industry sector, condensed city is seen as future
- 2013 first year of little decline in carbon
- update of agenda and processes every 4 years which is also linked to elections
- Analysis of Impact and Outcome - what can be done to integrate office buildings into responsibility
- Analysis of each district to identify a lack of energy saving
- Further step: which areas need to be refurbished? (Map)
- By implementing "rules" - multiuse of facilities and funds (Amsterdam investment fund - to make project countable and bankable), urban development (own version of Hafencity - how to upscale to get a mature way of working and transforming visions into real life) and matchmaking (interconnections of several institutions to create effort and benefit for every instance)
- Electric "car to go" is one column of Amsterdam to start the transform process
- Next steps from Intake Workshop:
  - "social" contract
  - thematic and areas approach, needs to go hand in hand, parallel process (configuration)
  - Shareholder needs to be taken into account as important stakeholder as well
  - Mainstream or Hobby? - challenge for Government
- Process of Transformation Agenda:
  - Talk of the Town - weekly meeting "open place to join"
  - Climate and Energy Advisory Board - Specialists, University, etc.
  - Local Elections are having impact
  - Transform experts meetings & validation

(More details in presentation “Intake Workshop_Pres.Amsterdam)

Questions and Answers:

- "Grid" impact is an issue due to privatization and monopoly of Grid Company. Integration and impact analysis needs to be made steady - good relationship through smart-city-platform.
- Trying to invite counterparties to balance the power
- strategic planning and decision making
- experts meetings and intake workshops as content wise similarities to HH
- influencing the thinking and change of the mindset as core values
- The group for the transform process is directly linked to elections and government spendings

Kopenhagen, Hans Christian Christiansen

- Outcome of transform process shall be a "Sustainable Energy Plan" - this is to be processed via an master plan and several intake workshops (incl. SWOT) - the key for Copenhagen is to look at the opportunities to achieve the planned outcome
- The way of working: From Data (Baseline analysis & Status Quo) to Goals
- "Intake Workshop" (SWOT; Prioritization; Road map (business cases and actions); Revisit strategy) to Implementation (Transformation agenda)
- The Intake Workshop is seen as a steady process itself which cannot be done within a couple of days. A plan is already in place and needs to be integrated into city society.
- It also needs to be taken into consideration that the climate area itself is providing different approaches (north or south - heating or cooling)
- it is crucial to start thinking "Out of the Box" - to look at the differences in politics, technical level and maturity - and develop a "think smarter" set up for every city, what means an better adaptation and flexibility (learning from each other) instead of working harder to achieve goals.
- Decision on transformation agenda they decided on two themes that seems to be feasable (Smart buildings, and part of climate agenda)
- complete process split into 2 parts:
  - Transformation agenda (on city level)
  - High level look at smart city transformation with focus on EU involvement and Government integration
  - Implementation plan (district level)
  - 6 smart urban city districts with several projects

Questions and answers:

- no direct involvement of politicians into workshops and set up - but several commitments
- Choosing of highest ranked themes (from 6 to 2) will need to be communicated to stakeholders

(More details in presentation “Intake Workshop_Pres.Kopenhagen)

Wien, *Pia Hlava*

- Breakdown from EU-targets and requirements to domestic support programs to focus on transformation process for all cities.
- Modal Split actual good situation - energy consumption with 14% of renewable energies already.
- Actual Projects:
  - CLUE (-climate neutral urban districts)
  - Transform (Smart city)
  - Transform plus (-energy fond and support of transform process)
  - Smart City Vienna (-general strategy until end of the year) but it is seen that it is more an concept and ongoing process
- Actual strategies:

- SEP (-städtischer Energieeffizienz-Plan)
- RAP (-Aktionsplan für Erneuerbare Energien) Geothermie, Solar
- KLIP (-Klimaschutzprogramm) seit Anfang 2000 - Maßnahmen Paket, 385 aktuelle Maßnahmen (2020)
- STEP (-Stadtentwicklungsplan) - Verdichtung und Siedlungsentwicklung

- Mobility:
  - MPV (Masterplan Verkehr) Modal Split im Mittelpunkt
  - STEP (-Stadtentwicklungsplan) Fahrradverkehr soll gesteigert werden, Fußgängerverkehrs-strategie
  - KLIP (-Klimaschutzprogramm) als Teil der Mobilitätsentwicklung
- Structure and Implementation of strategies:
  - Roof strategy as guideline and tracking functionality (-how to deal and connect different "sup" detailed strategies)
  - innovation: 3 impulse (economics, science, education)
  - quality of life: 3 impulse (buildings, infrastructure, healthcare)
  - ressources: 4 core modules (mobility, energy, etc.)
  - Intake workshop as connection of transform processes and core strategy with 9 focus topics which have been defined and already implemented into transform plan and which will be adapted to their core topics.
  - Due to the fact that Vienna is facing a huge inflow of new citizens they have focused on new buildings, refurbish existing buildings and how to optimize the actual mobility (modal split)
  - Positive feedback from politics and concrete follow up on main topics already in place.

Questions and Answers:

- Energy networks are directly linked to government (not privatized)
- How will quality of life be measured? employment situation, science, net income - but Vienna has focused on environment, health and employment situation

(More details in presentation “Intake Workshop_Pres.Wien)

Item 7 Towards a smart city. Transformation process and agenda

Short introduction, *Dr. Ulf Skirke*

Beneficial factors:

- Change in values towards sustainability
- Technology development must be flexible enough to react to new innovations.

Blocks:

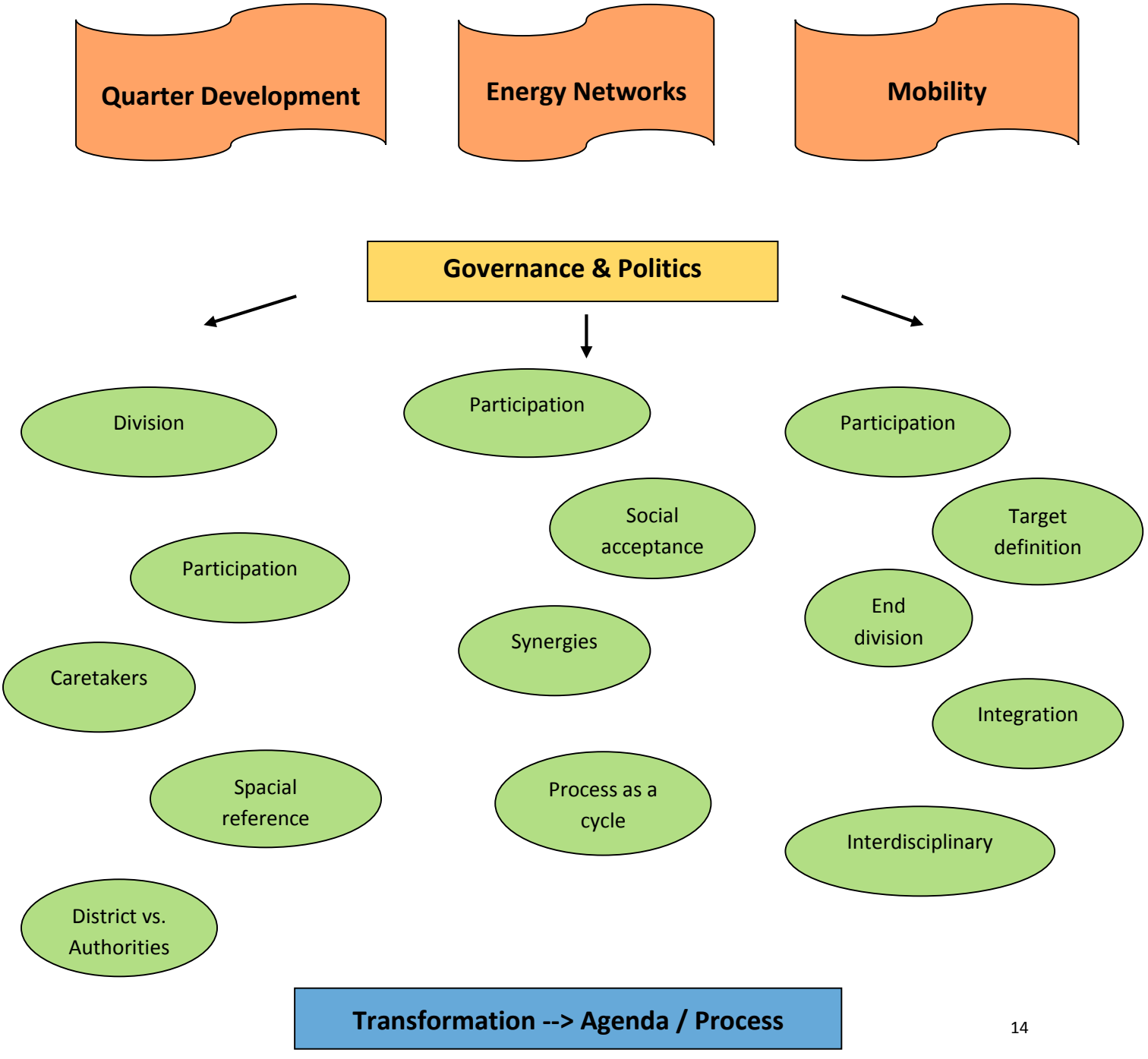
- Dependency on channels: The opportunity should be seized to guarantee exchange of ideas with the other five cities and new ways to identify solutions.

- Tight time windows impact flexibility and learning negatively and cause adaptation processes to be neglected.

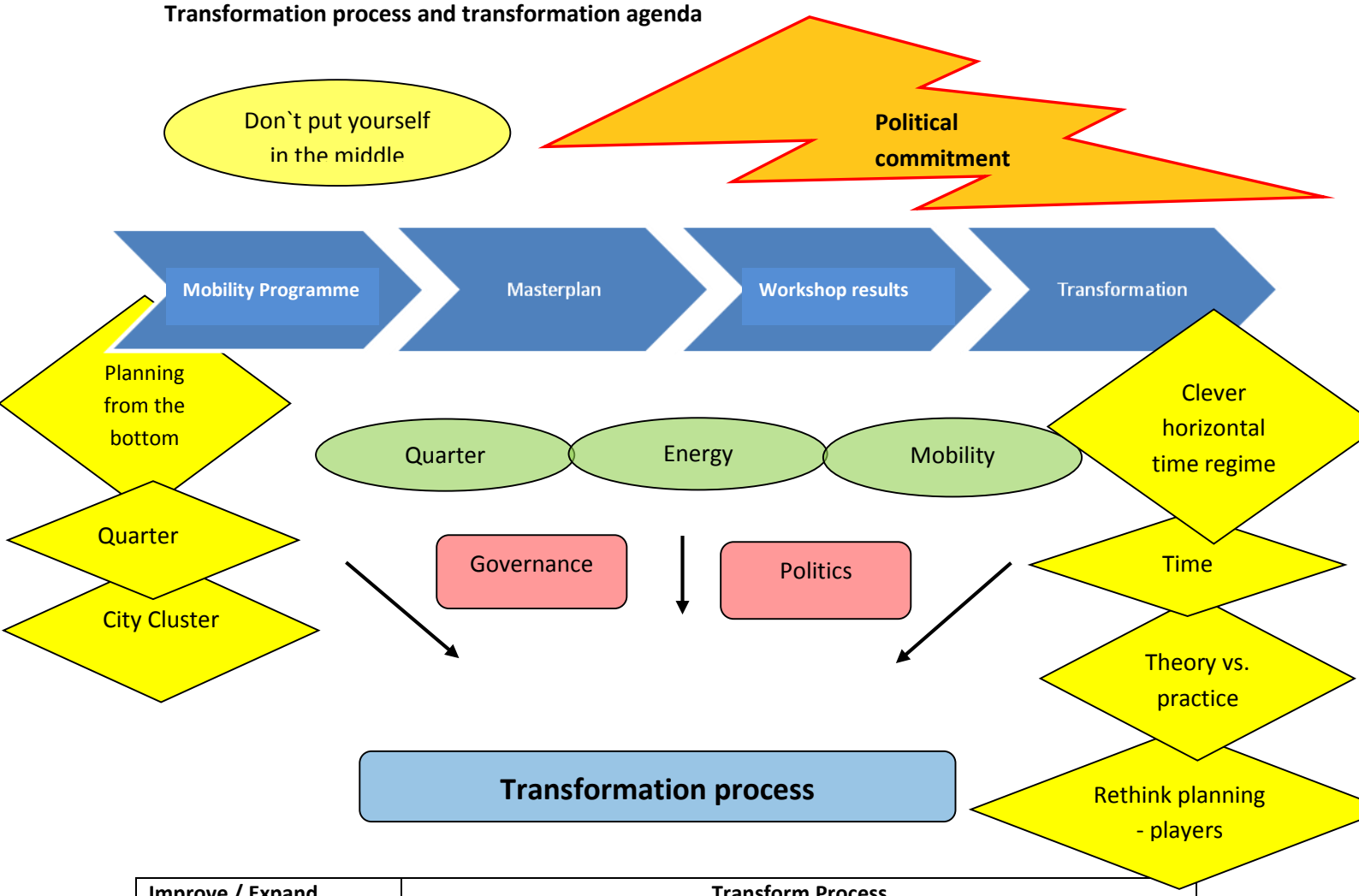
The way towards transformation agenda:

- Intake Workshops should be seen as the first step towards the future transformation cycle whose ideas, goals and recommendations are fed into the city process. Experiences of the city cycle must however be seen.

SWOT und PESTLEGS results



Transformation process and transformation agenda



Improve / Expand	Transform Process		
	Pulblic	**Mainstream**	**Lift fronts**
Involve science	Canvassing	Carpe Diem & Rotation	Advisors
Economy and finances	Target-oriented participation	Concrete implementation Strategy	Time management
Critical competence, increase competence, Channels and resources	„Matchmaking“	(stimulus) funding	Equa opportunities Participation
	Funds	**Social mainstreaming**	Instruments
	Media		Honesty

Transformation Agenda

Transformation Agenda	
Atlas and monitoring (How?)	Tools - Simulation
(Stimulus) funding	Funds
Transparency	Information pass
Mobility – data?	Social ...; ...; ....
Districts	Open Data Portal
Language diversity	

Item 8 Smart Cities, *Sigrid Lindner and Prof. Dr. Oßenbrügge*

For explanations see presentation. Discussion points flow directly into the matrix for transformation process and transformation agenda. For further explanations see presentation "Intake Workshop Pres. Lindner" and presentation "Intake workshop Pres. Ossenbrüge".

Item 9 Feedback

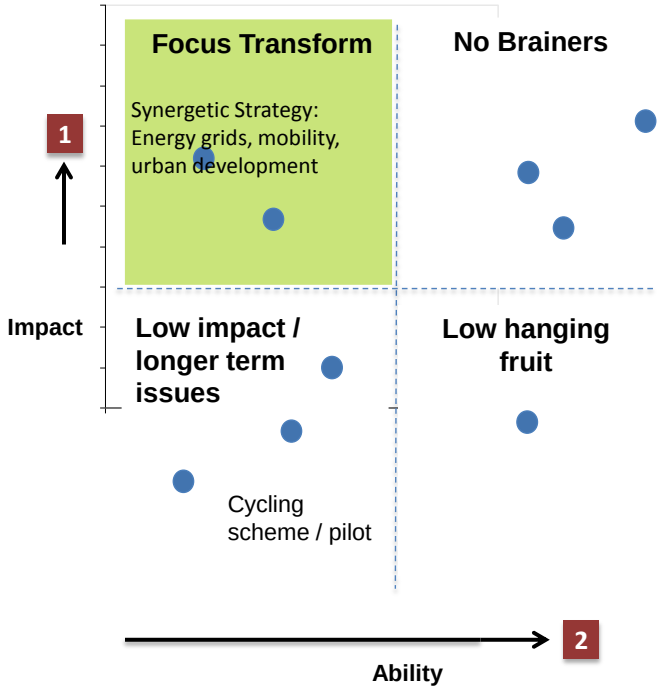
In connection with the intake workshop participants are asked to provide their feedback on the event. Results are summarised below:

Positive Feedback	Critical Feedback
▪ Information on energy atlases ▪ Chance to get involved in designing the future of European cities. ▪ Interesting discussions ▪ Target reaching ensured and good workshop process ▪ Interesting overlap of the results of the three topics	▪ Conclusions reached should be implemented immediately ▪ Emphasis on planning methodology ▪ Discussion of concrete points would be more interesting ▪ Time for SWOT analysis etc. was too short (pairing/conversion of elements would be more interesting) ▪ Use of PESTLEG should be reconsidered ▪ Integrate benefit for participants ▪ Spectrum of stakeholders/participants is not broad enough, for example no apartment construction company present (quarter) ▪ Text of the invitation regarding workshop topics and tasks should be drafted more clearly.

Appendix:

The down-selection process Hamburg

Within the Transform project the focus lies on themes that have a relatively high impact and that are difficult to implement



1 **Impact on Indicators**

- % Carbon reduction
- % Renewably energy
- % Energy Efficiency

…and other values concerning city sustainability (economy, society, environment)

2 **Ability to implement (PESTLEGS)**

- **P**olitical involvement
- **E**conomic & Financial feasibility / Market development
- **S**takeholder engagement
- **T**echnological enablers
- **L**egislation
- **E**nvironmental governance
- **G**overnance (E-Governance)
- **S**patial opportunities

Minutes: Dr. Anke Butscher, Benjamin Sitarek