Technology Assessment

A short introduction

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Background

- Importance of technology for society.
- A lot of technologies need a huge amount of infrastructure.
  (Air traffic, Mobil phones, Internet…)
- Technologies are inextricable interconnected and interact with each other.
  (electricity brake down in August 2003 in New York …).

Background

- No definition, plastic word
- Diversity in subjects and state of development
- More concepts or research questions that technology
- Different actors with different goals
- Prominent term in research policy A lot of funding has been allocated
- Market starts to use the term
- First products are on the marked
- Public is not aware and not well informed
- Lack of knowledge concerning toxic effects of NP

Background

- Technologies has multiplied more and more the power of mankind to control nature.

Background

deforestation State Washington ➡

Tree Harvester

Background

- complexity of nature

➡ intervention of human could have tremendous effects.

Dried up Aralsee

What is Technology Assessment?

The use of new technologies are unavoidable connected with changes, ignorance, insurance.

Technology assessment aims at influencing the development of technologies in order to reduce unwanted side effects.

This goal is approached by a systematic analysis of social and ecological impact of new technological developments (present and potential).

What is Technology Assessment?

- TA can not predict the future. It is not possible to avoid unwanted side effects.

  But it is possible to reduce them or to make them obvious and transparent for a public discussion.

- Who will profit, who will loose?

- Do the benefits balance the disadvantages?

- What kind of policy measures can reduce the disadvantages, or can balance unjust distribution of benefits and disadvantages?

Crucial question for TA of NT:

- How can we know the potential harm or benefit of an emerging technology?

Process of TA: example NT

Situation appreciation

↓

Problem Definition/
Framing

↓

Design of the TA-Project

(NanoTrust-Project)

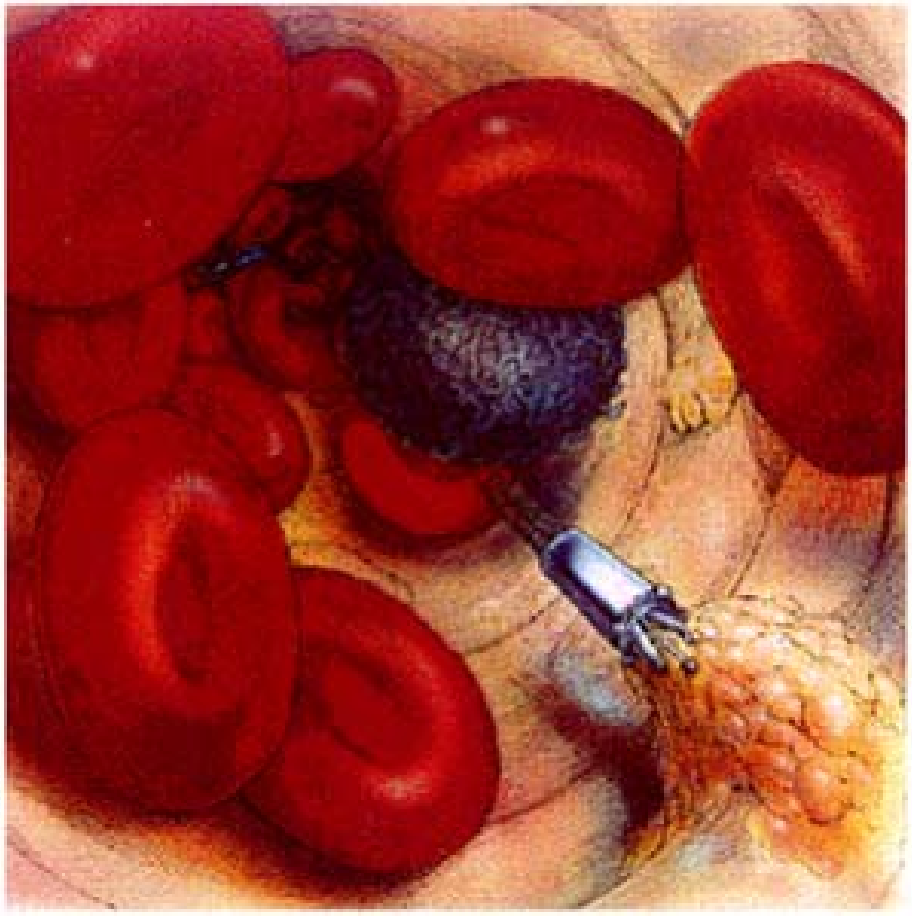
Process of TA: example NT

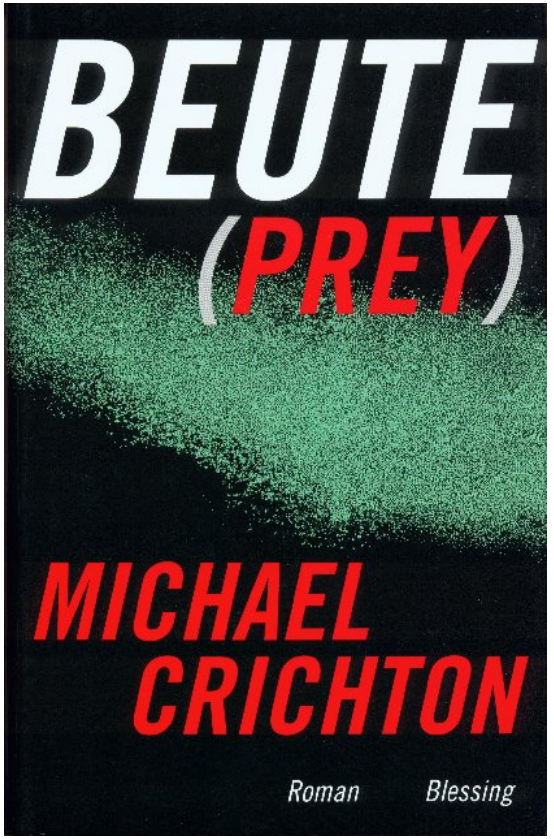
Situation appreciation:

Analysing the social and technical and political context:

- What kind of research and technical developments are performed under the term NT?
- Who are the actors? What are their interests?
- What kind of solutions are addressed by NT research?
- What kind of products could be the come out?
- From whom an in which context will NT be used?
- What is the political background (awareness, conflicts, debates)?
- How does it fit in existing regulation?
- What kind of values are touched or even questioned?

Perception of NT in the general public





Process of TA: example NT

Situation appreciation

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Problem Definition/ Framing

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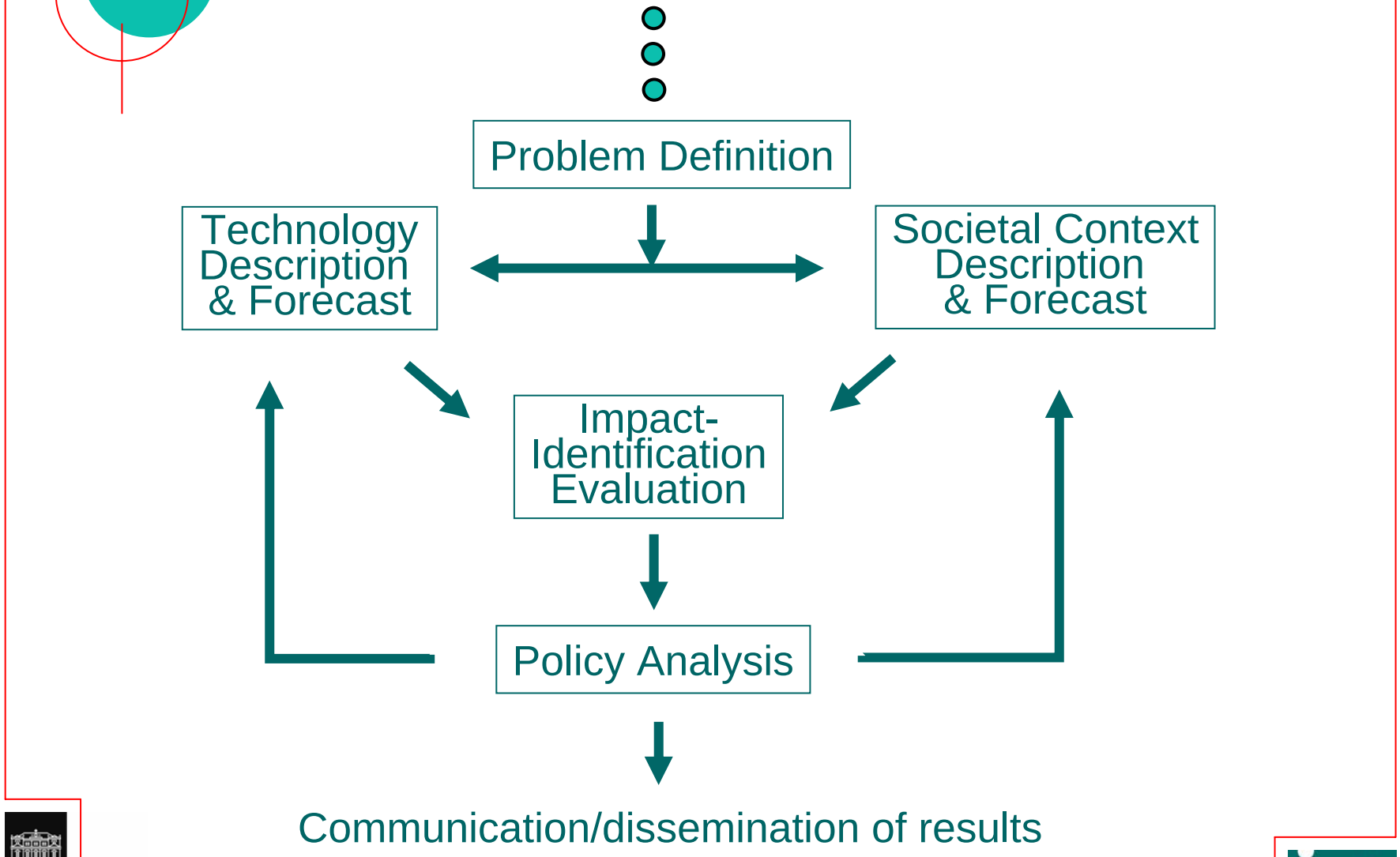
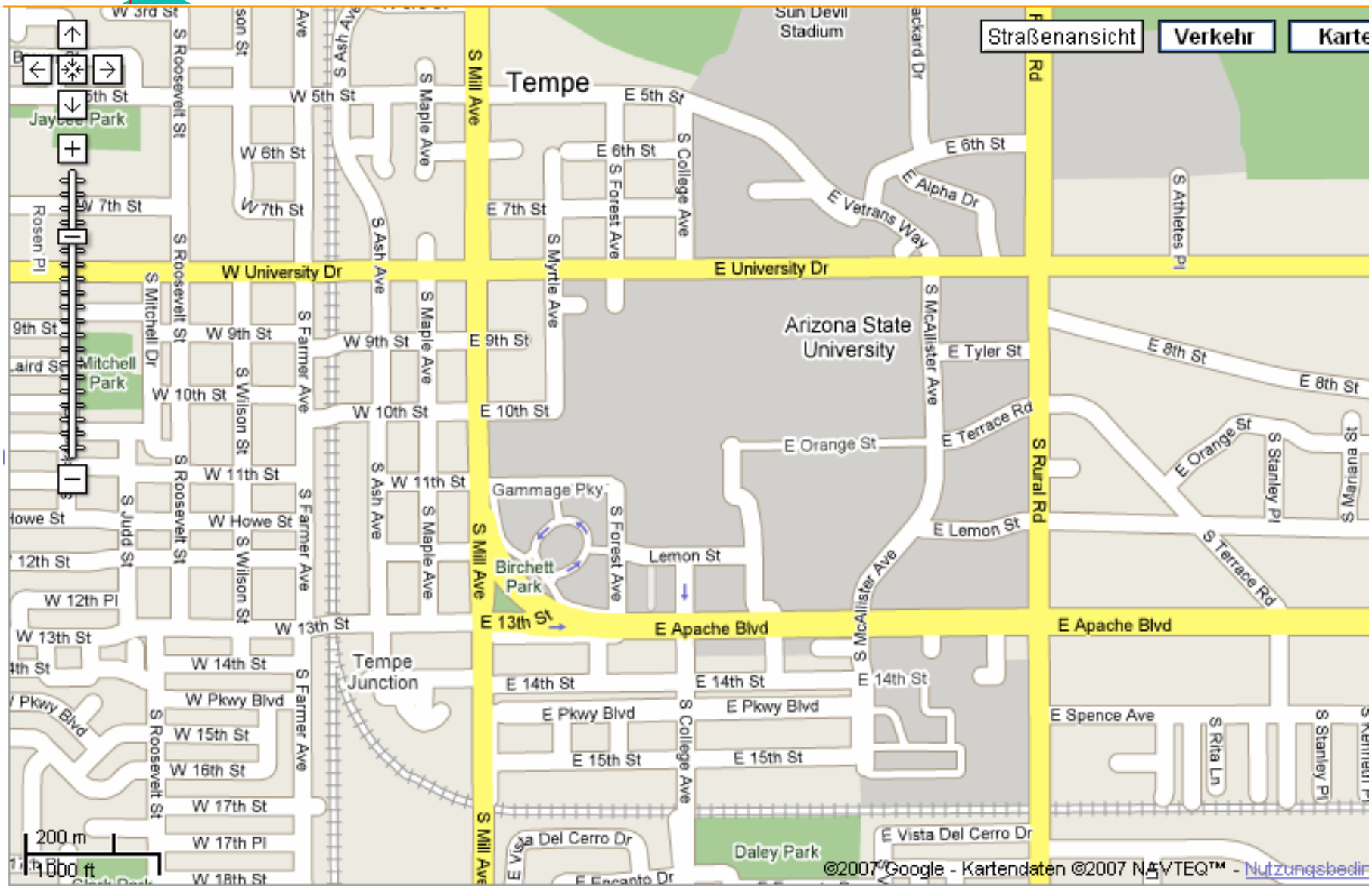
Process of TA: general

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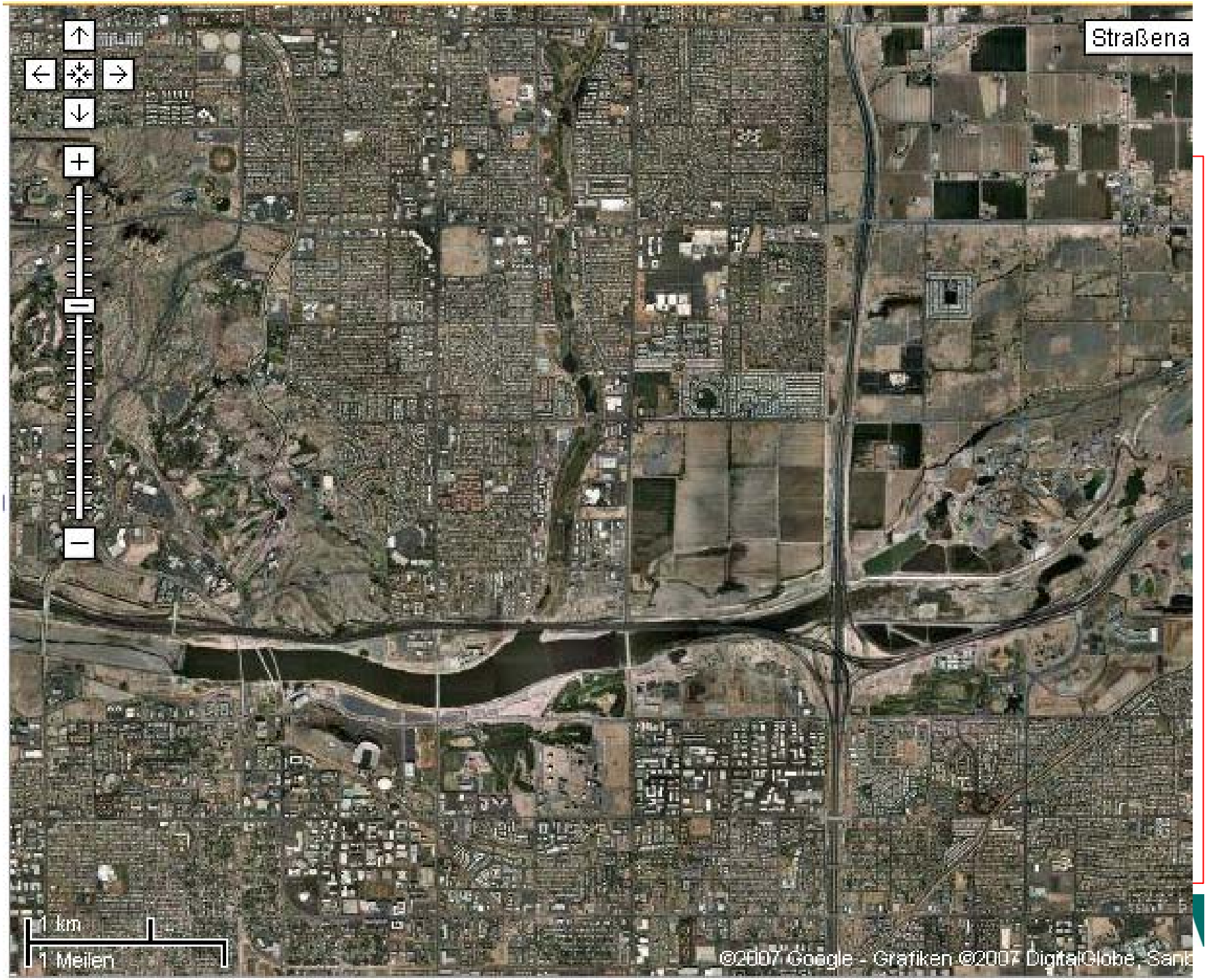
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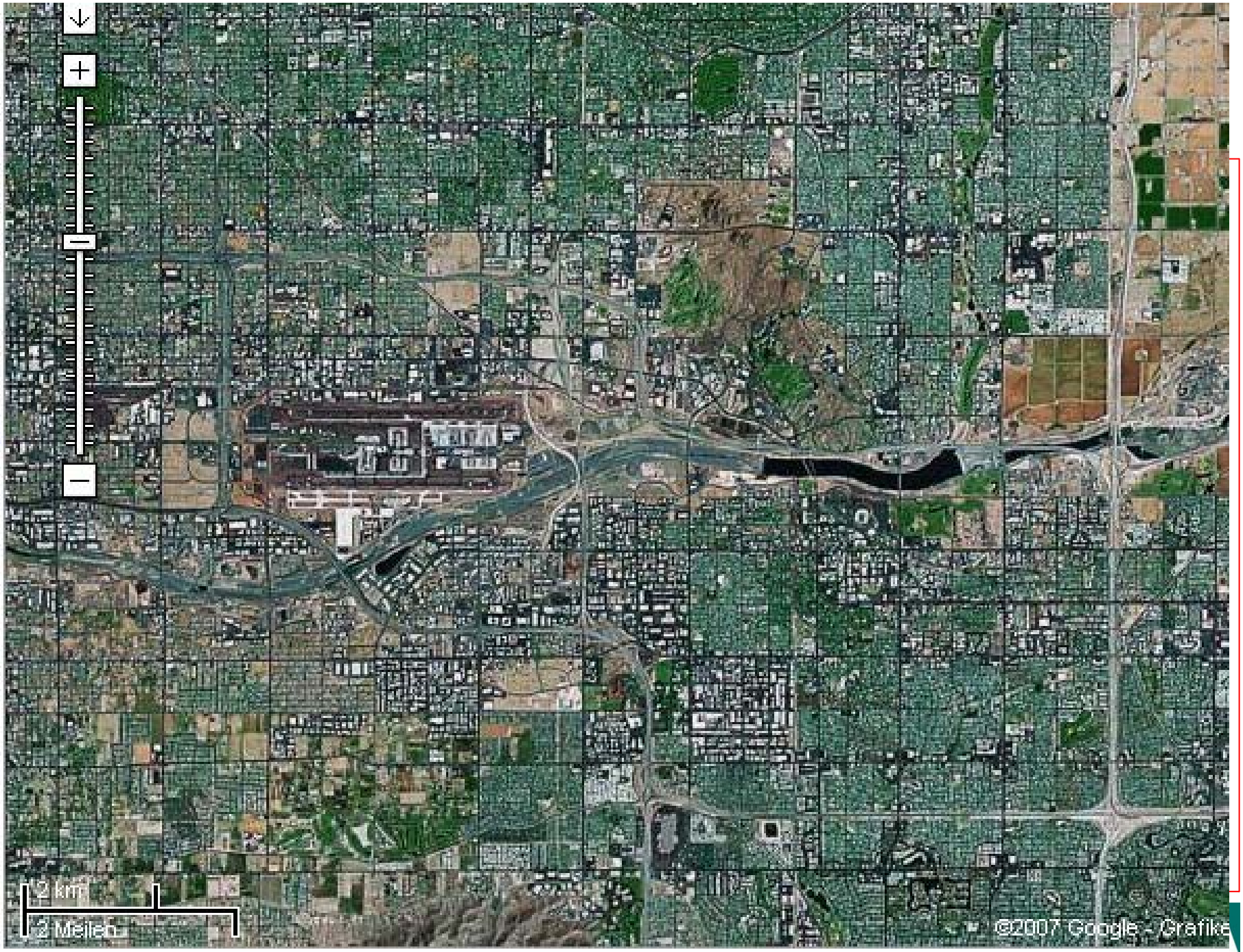
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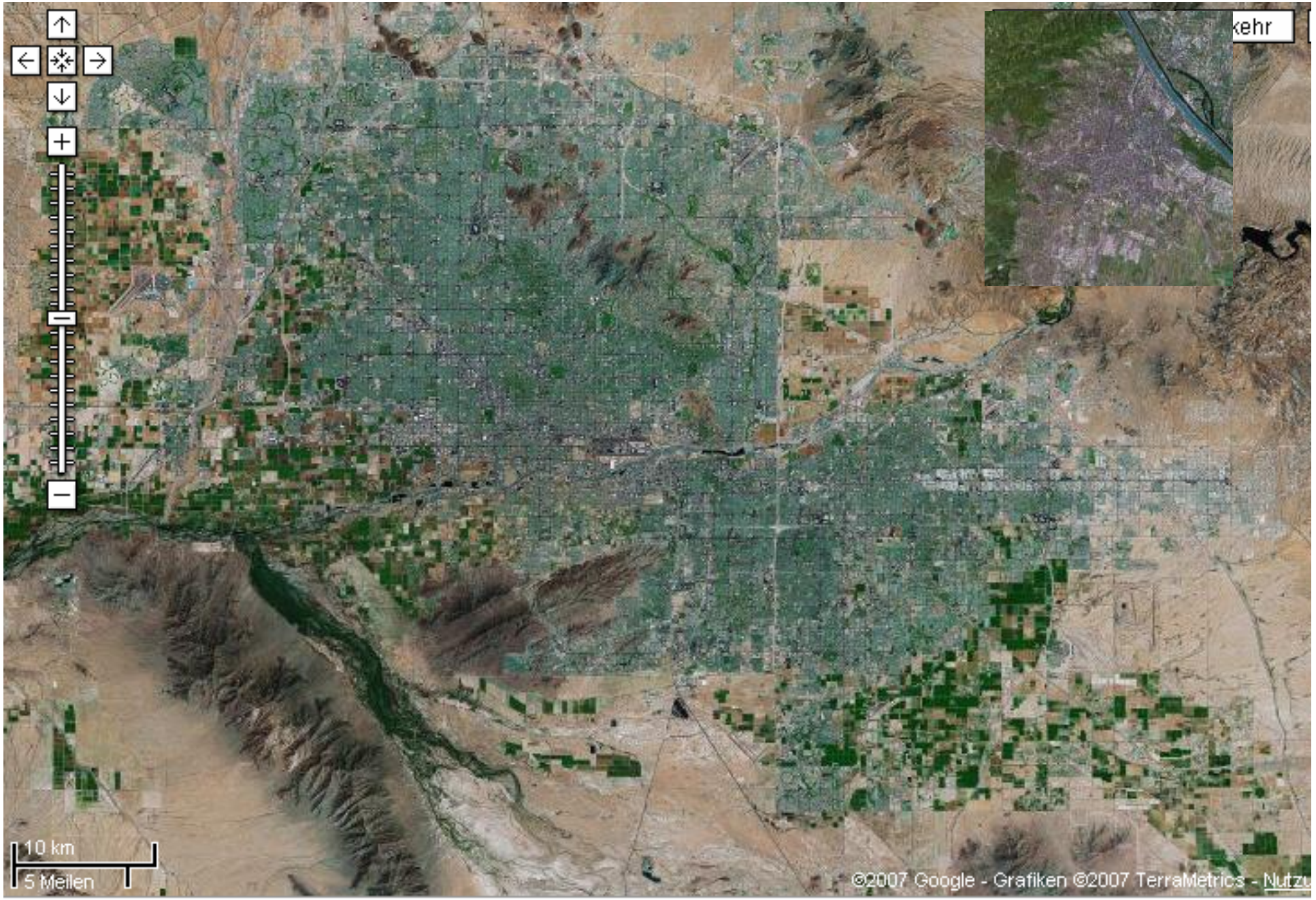
kehr
10 km
5 Meilen
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Quelle: Spektrum der Wissenschaft 12/2005