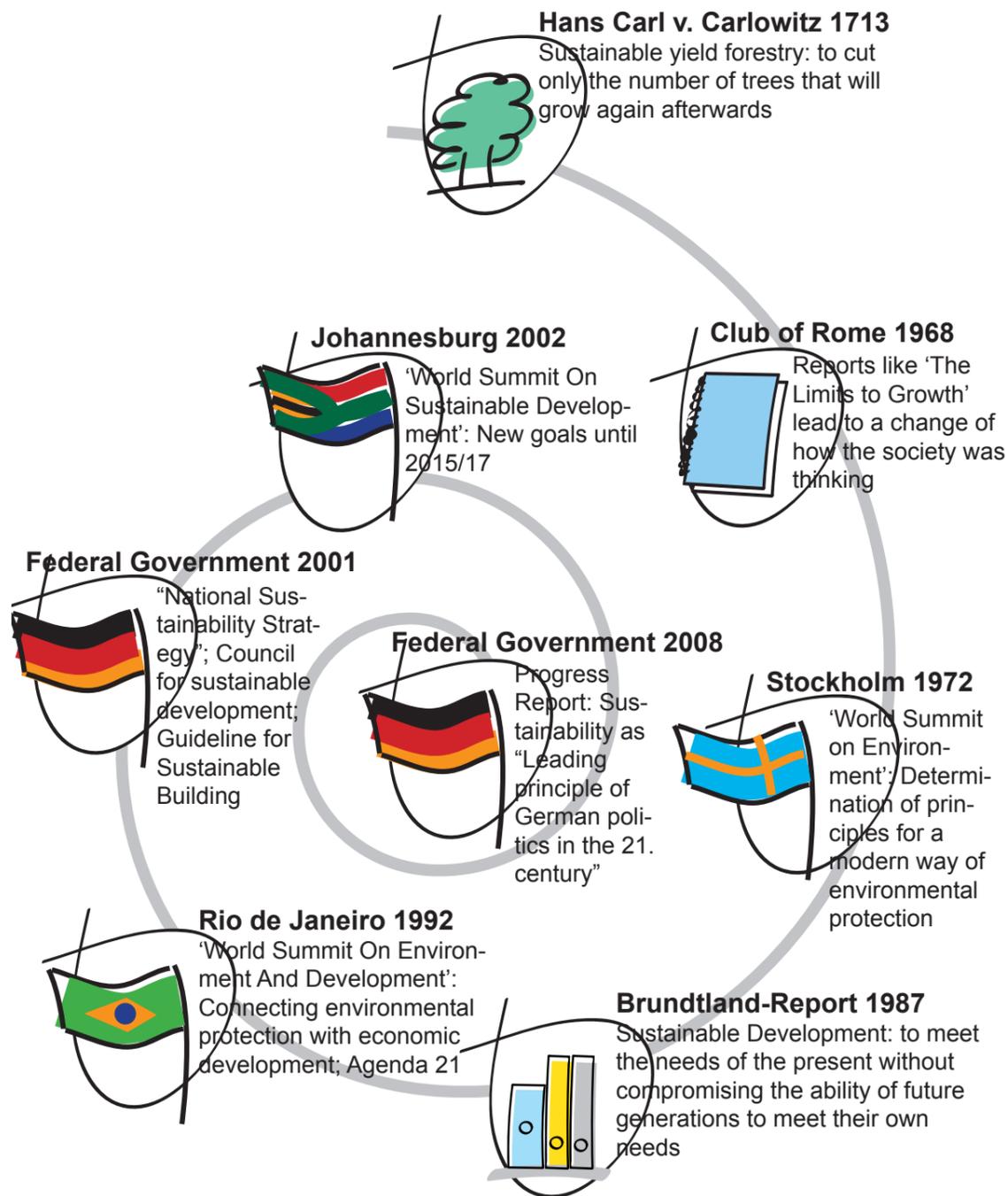


International Building Performance Evaluation (IBPE)

**The German Sustainable Building Certificate:
A New Tool For Building Performance Evaluation**

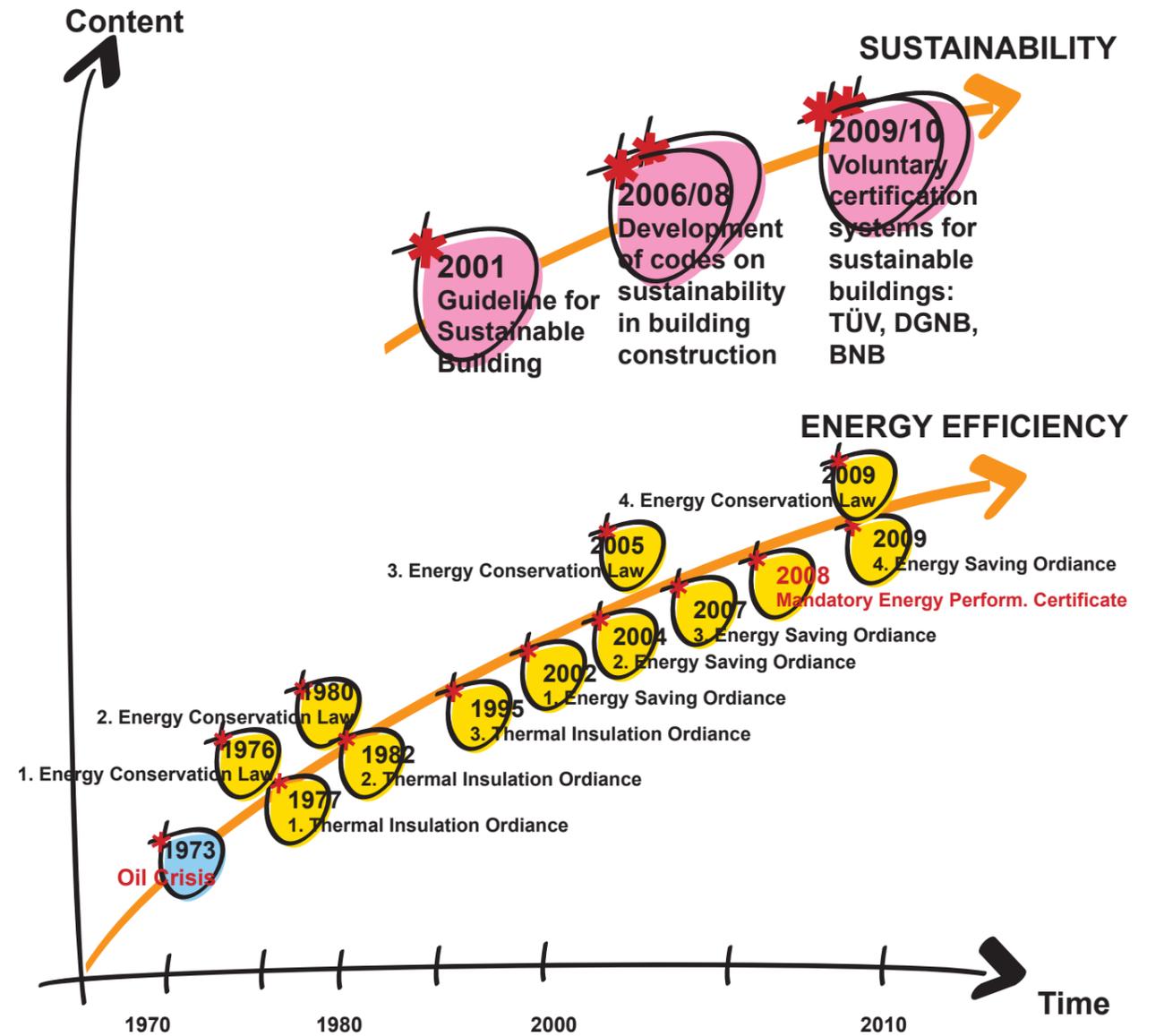
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Development of sustainability in Germany
(own diagramm, based on Hauff, V.: „Strategien für eine nachhaltige Entwicklung“, in: Architektenkammer Nordrhein-Westfalen (Hg.): „Natur und gebaute Umwelt - Herausforderungen für Architekten und Stadtplaner“, 2009, S. 21 - 26)

How did ,sustainability‘ in Germany develop?

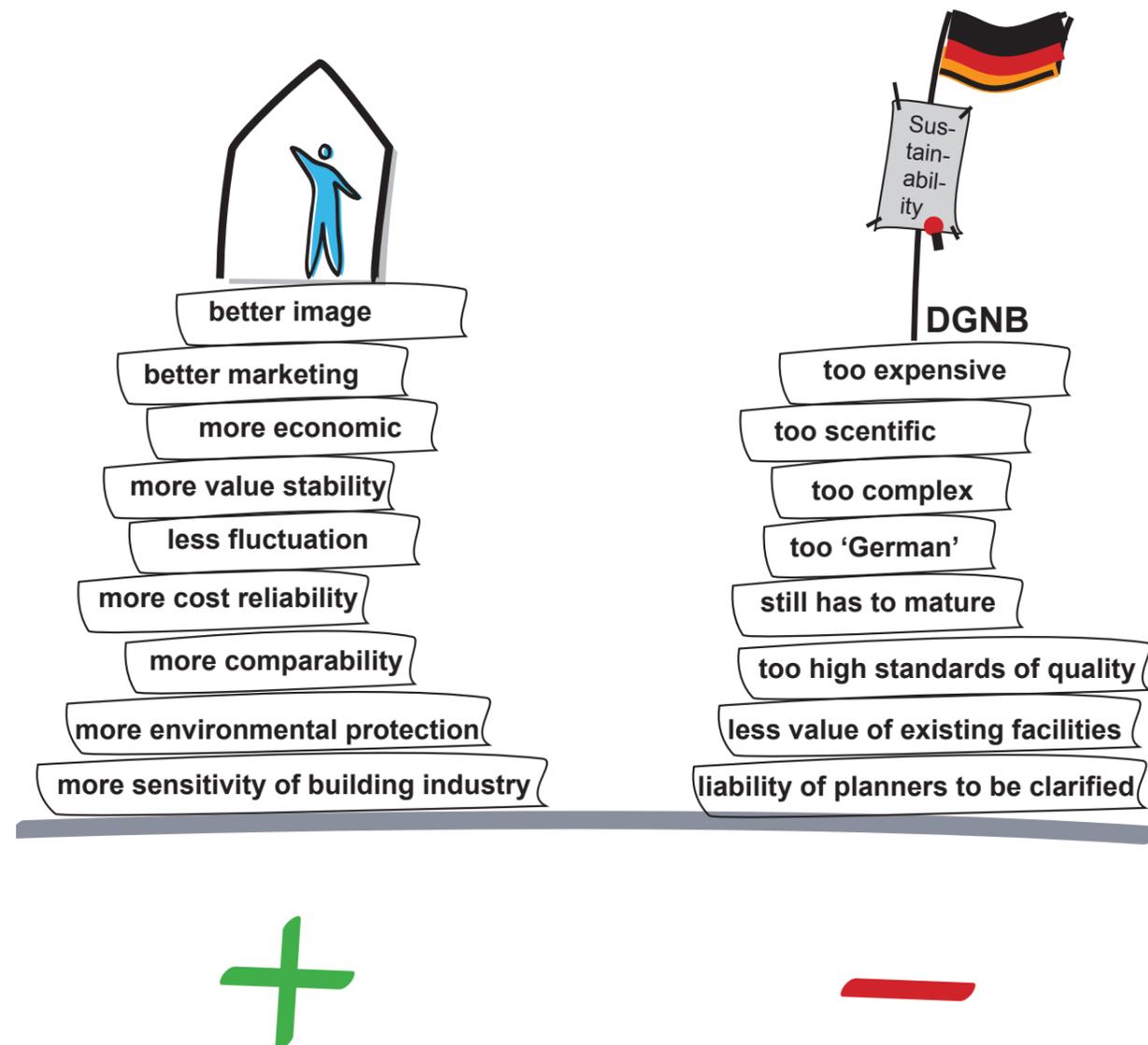
- First publication in 1713: ,sustainable yield forestry‘
- Famous reports started to change the attitude of society
- Participation at international conferences paved the path
- German Federal policy includes ,sustainability‘ (2001/2008)



Development of the policy for sustainable buildings in Germany
(own diagramm)

How did the policy for ,sustainable buildings‘ develop?

- oil crisis: focus on energy performance and efficiency
- series of laws and ordiances: increase of requirements
- more than green: environmental, social + economic demands
- from guidelines and codes to voluntary certification systems

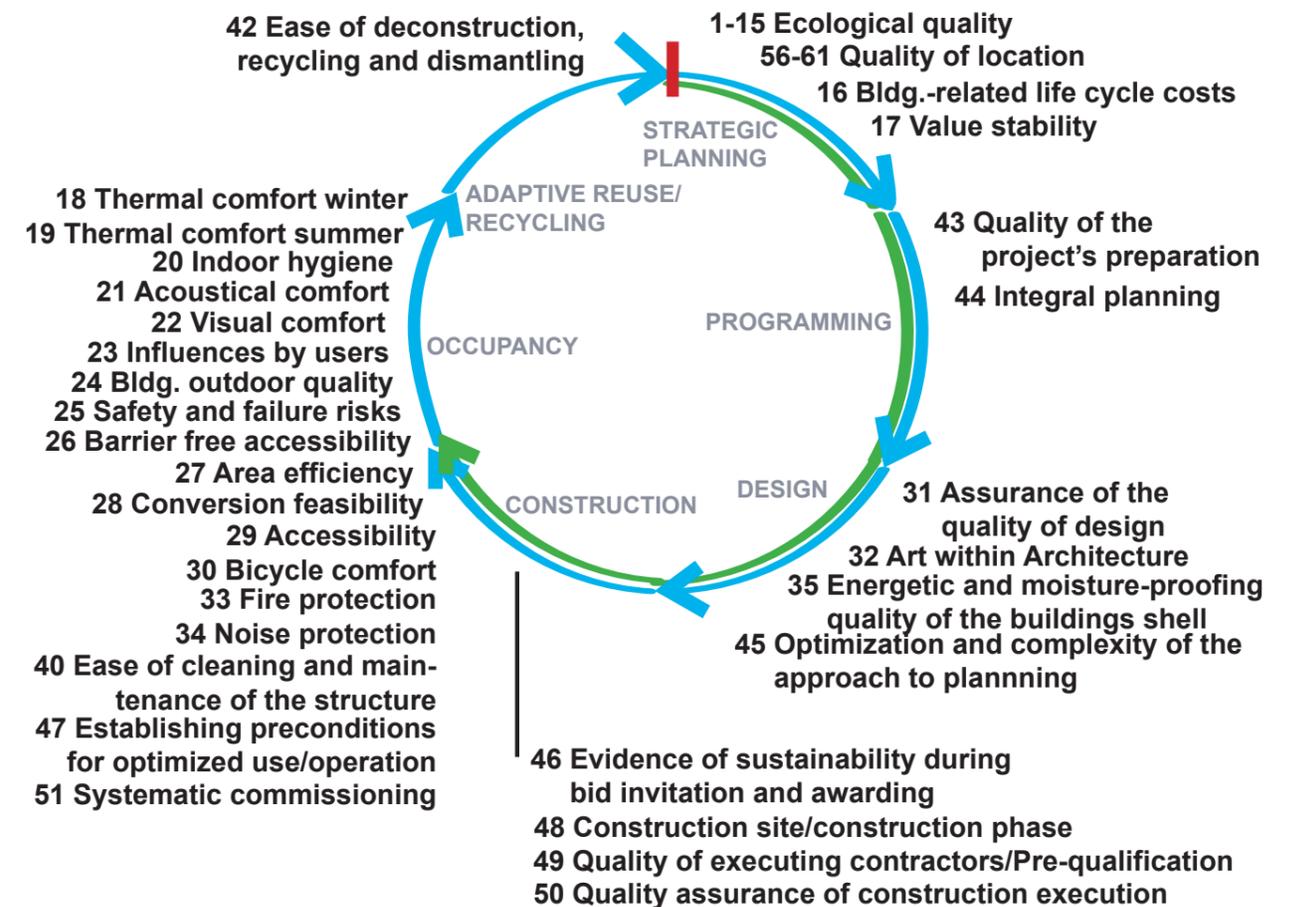


DGNB-certificate's strengths and weaknesses

(own drawing, using Streck, S.: „Nachhaltigkeitszertifikate: Fluch oder Segen“, in: Der Facility Manager, 04/2010, S. 40 - 42; Goldmann, M.: „Zu gründlich Deutsch?“, in: Deutsches Architektenblatt 12/2008, S. 48 - 51)

What are the certificate's strengths and weaknesses?

- brings advantages for building (eg. better quality)
- brings advantages for owner/user (eg. economic)
- has disadvantages for owner (eg. extra costs)
- has disadvantages for planers/auditors (eg. ‚too German‘)

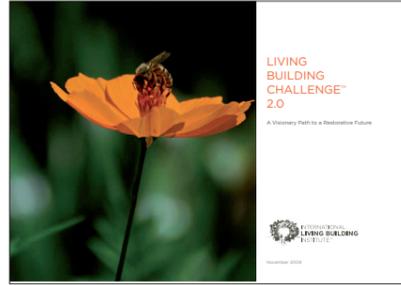


DGNB criteria in relation to the sub-phases of the BPE model

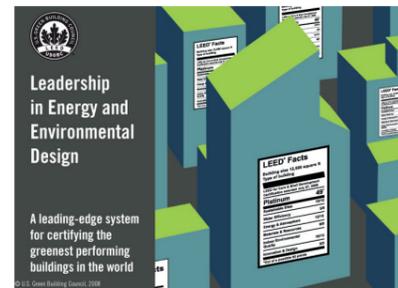
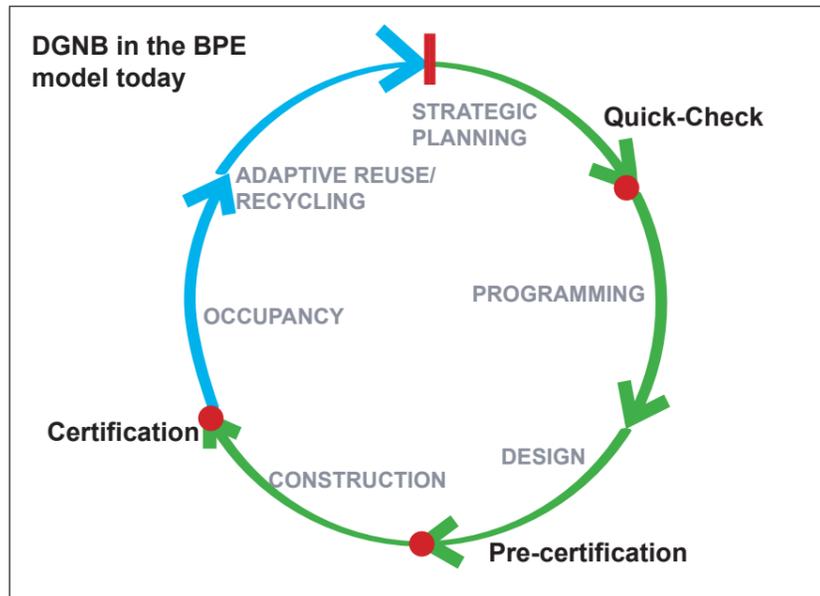
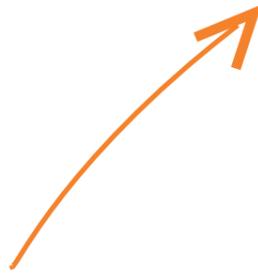
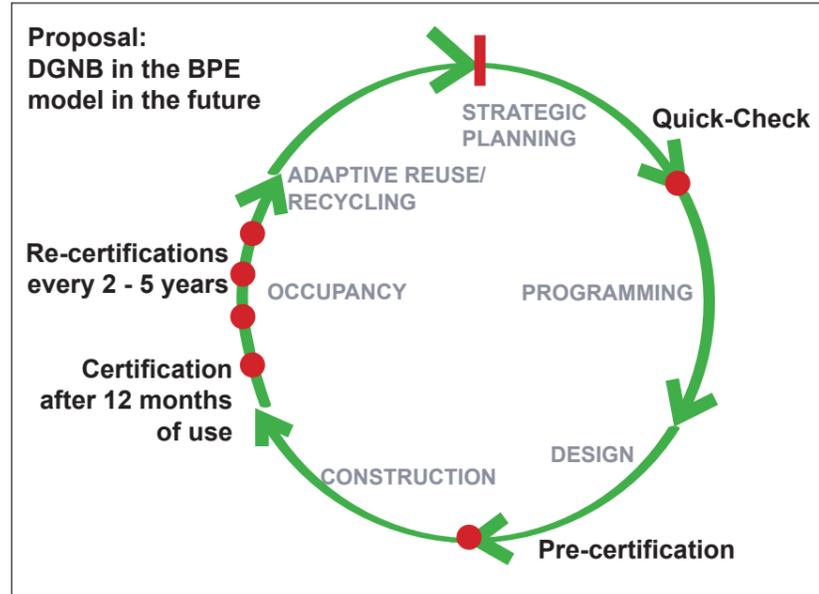
(own diagramm, using DGNB: „German Sustainable Building Certificate“, 2009, S. 11)

How does the certificate fit in the BPE model?

- the holistic view on a building's life cycle is strengthened
- bldg. industry is sensitized: 61 criteria relate to all 6 phases
- the evaluation framework of the BPE model is taken up
- but: rating ends before occupancy starts!



Living Building Challenge projects must be operational for at least 12 months (Baumann, O.: „Die USA auf dem Weg zum Null-Energie-Haus“, in: Technik am Bau, 03/2010, S. 58)



LEED 2012 will also consider the actual performance (Baumann, O.: „Die USA auf dem Weg zum Null-Energie-Haus“, in: Technik am Bau, 03/2010, S. 58)

Finally, how could the DGNB-certificate be improved?

- should be based on actual rather than modeled performance
- should focus more on users well-being, less on marketing
- ==> should include user's feedback during occupancy
- ==> should introduce re-certifications on a regular basis

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