

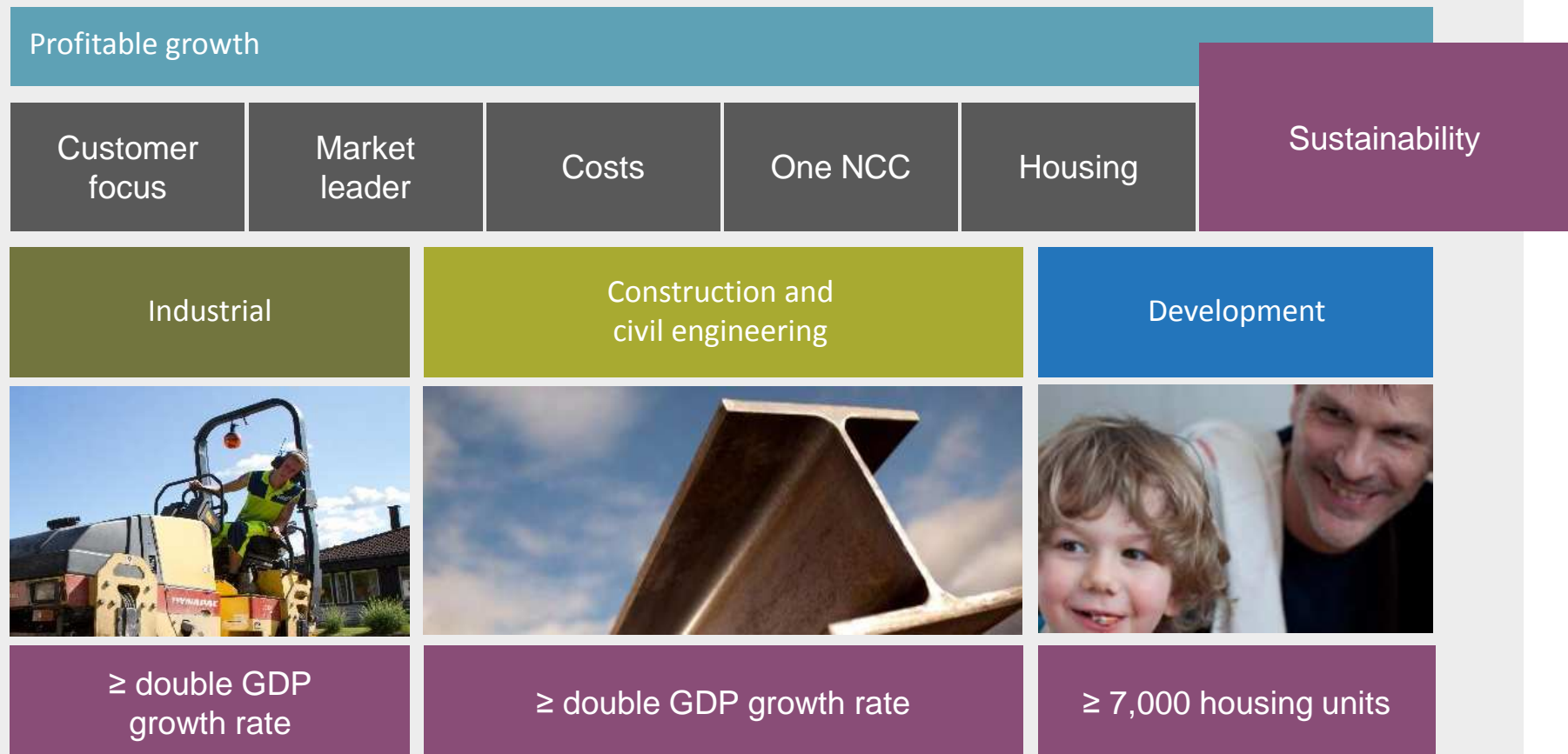
Sustainability

Engineers of the future what skills should they possess outside their core competences to transform society in a sustainable direction?

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SVP Corporate Sustainability, NCC Group

Strategy 2012-2015



Our vision

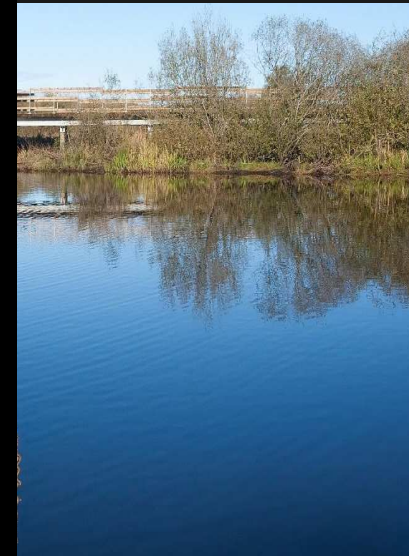
To *renew* our industry and provide
superior sustainable solutions

”GEO5 – Outlook 2013 Environmental trends”

- Greenhouse gas emissions are projected to double in the next 50 years
- Severe weather conditions will increase
- Land requirements for urban use will increase
- Reduced availability of water
- Increased water pollution
- Continued depletion of biodiversity
- Increased chemical exposure
- The waste stream increases

Increased demand/market value for:

- sustainable infrastructure and buildings, climate-resilient structures including refurbishment
- storm-damage repair/reconstruction
- energy efficiency retrofits and technologies
- renewable, recycled, and resource-efficient materials and processes
- green buildings
- workforce skilled in sustainable design and construction
- Reputational benefit associated with green design and construction certifications



Increased focus on social responsibility

- Sustainable economic and social solutions
- Cooperation for healthy and safe residential areas
- Contribute to local work opportunities and business
- Dialogue, empowerment and local commitment



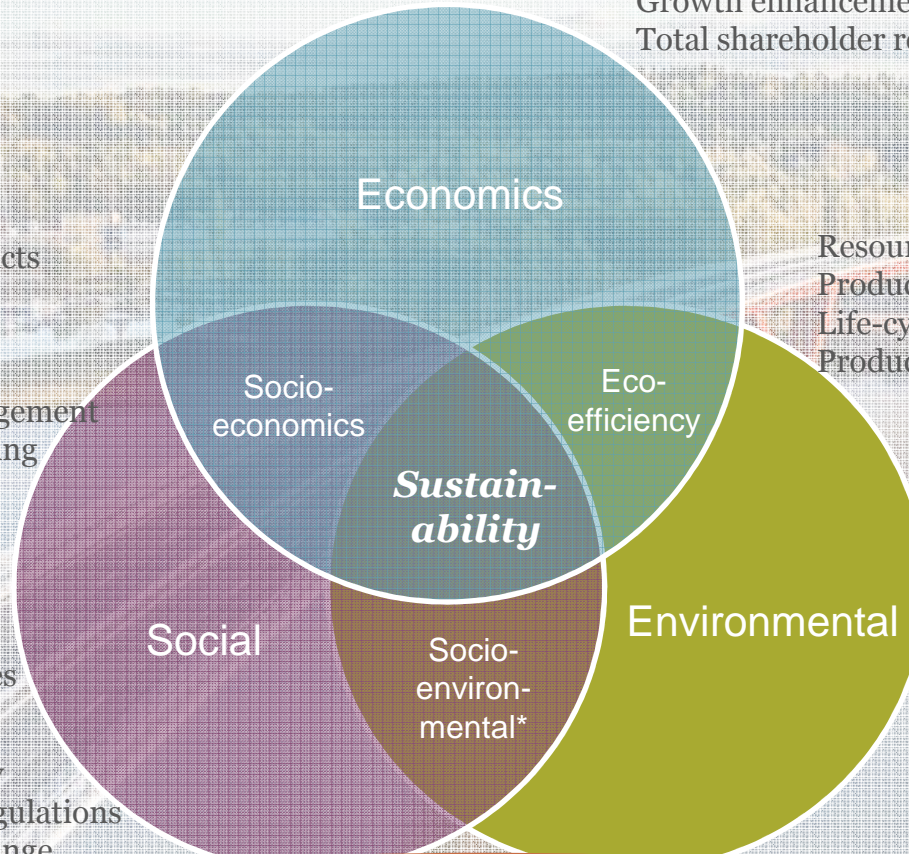
All of sustainability

Capital efficiency
 Risk management
 Margin improvement
 Growth enhancement
 Total shareholder return

Job creation
 Skills enhancement
 Local economic impacts
 Social investments
 Business ethics,
 Security
 Supplier chain management
 Sustainable purchasing

Diversity
 Human rights
 Community outreach
 Indigenous communities
 Labour relations

*Health and safety
 Environmental regulations
 Global climate change
 Crisis management
 Clean water
 Environmental justice



Resource efficiency
 Product stewardship
 Life-cycle management
 Products to services

Water & land emissions reductions, resource efficiency
 Zero waste, releases & spills
 Biodiversity, near to zero energy buildings, eco system services, towards non hazardous sustainable materials etc

Compliance and CoC

The Compass

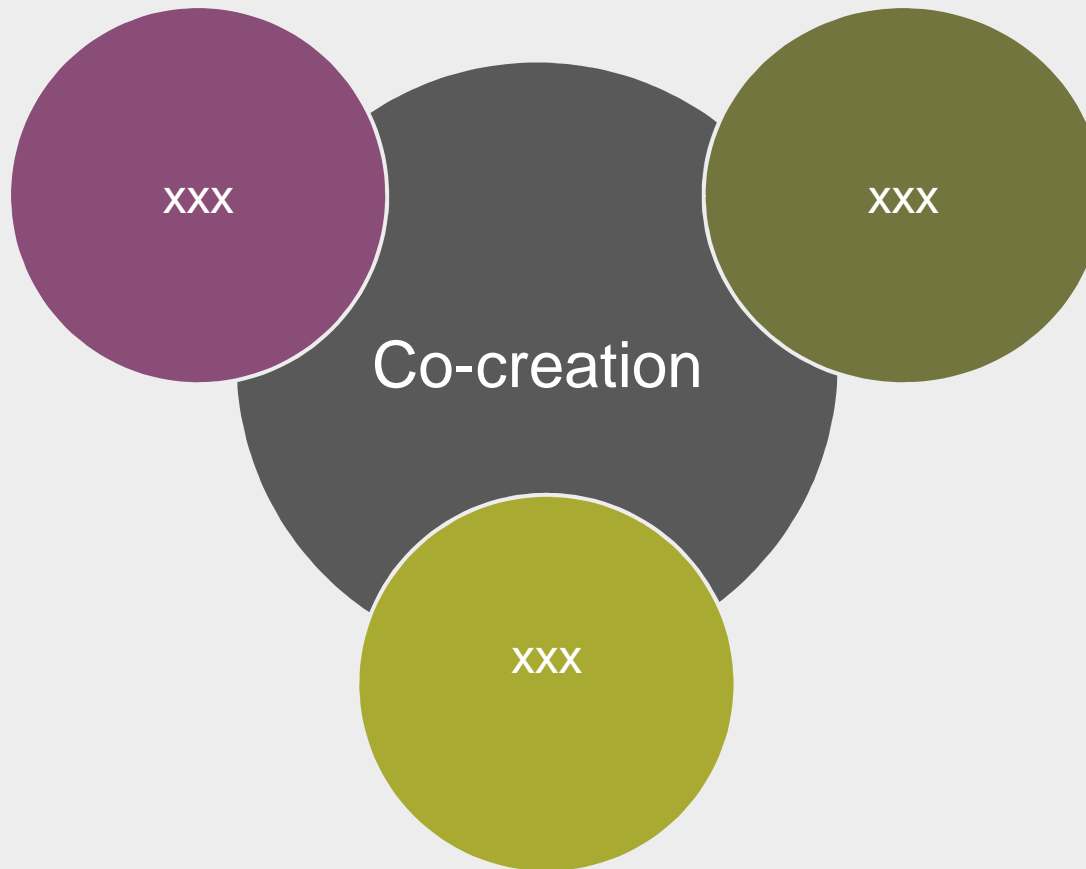


Which skills do we meet, need?

Fueling asphalt plants using *wood pellets*



Transdisciplinary work is demanded today.







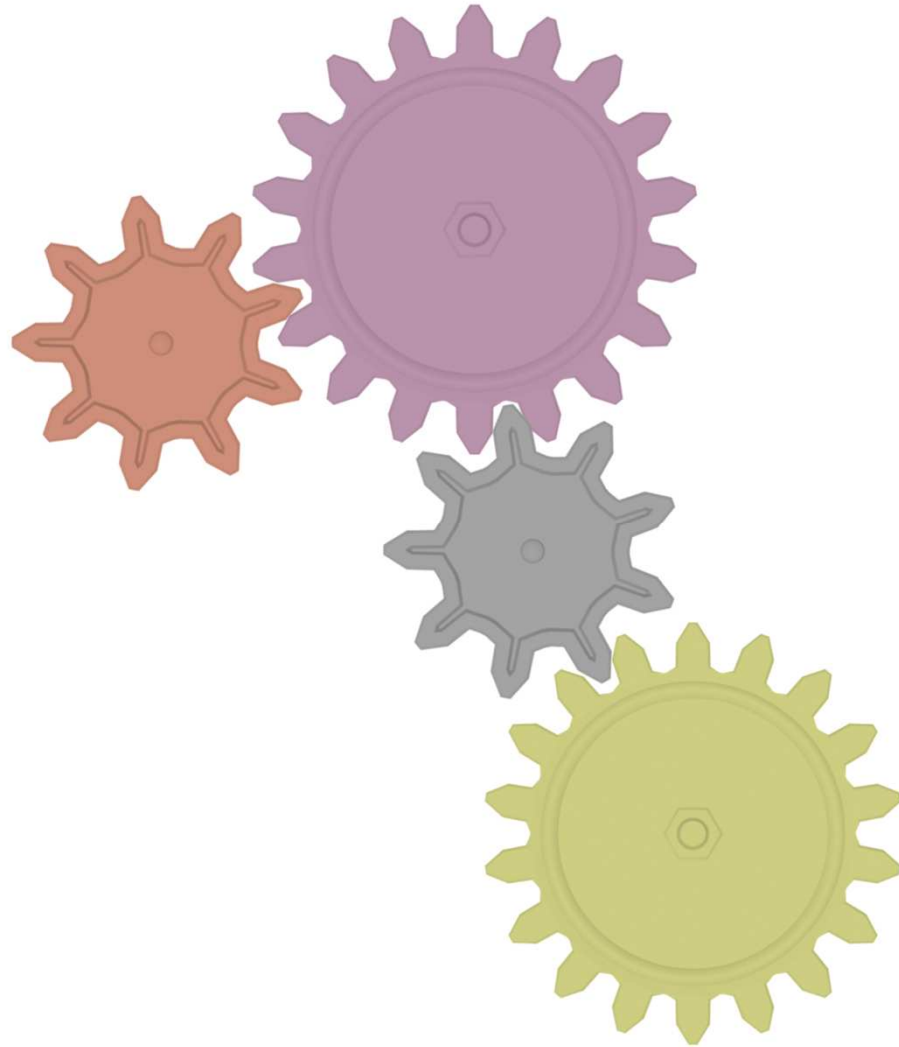
Leaders
Empathy techniques and principles to
uncover other's
(consumer/customer/stakeholder/partner etc)
needs and insights to drive innovation

Conclusions:

- Elaborate on the role of the university in society?
Transformation role:
- See to that KTH prepare students for interaction with other disciplines already during the education
- Let your students then practice collaboration with other competences- expose to diversity through out the education
- Take advantage of campus as an “Open lab” that is close to real situations and collaborate across disciplines.
- Teach tools for taking different perspectives(customer, consumer, stakeholder, partner)
- Companies should be engouraged to take on students for practise preferably not only in the summer time.



Transdisciplinary
collaboration is the
necessary key to
success!



A superior sustainable solution by NCC!



Thanks for the attention any thoughts mail me
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The Dome of Visions