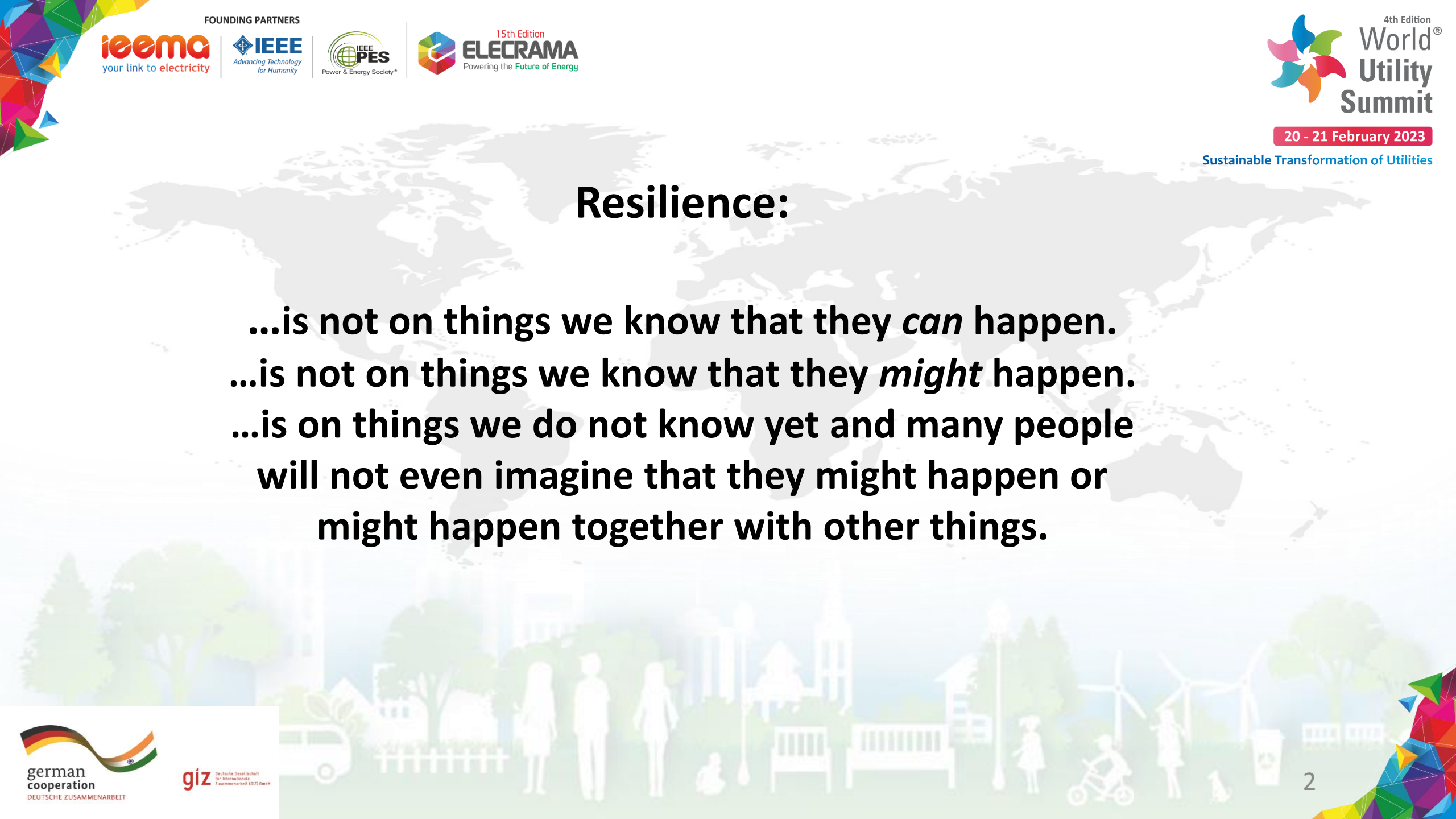




Resilience: Prevention and Management. A closer look on (some but not only) German Examples

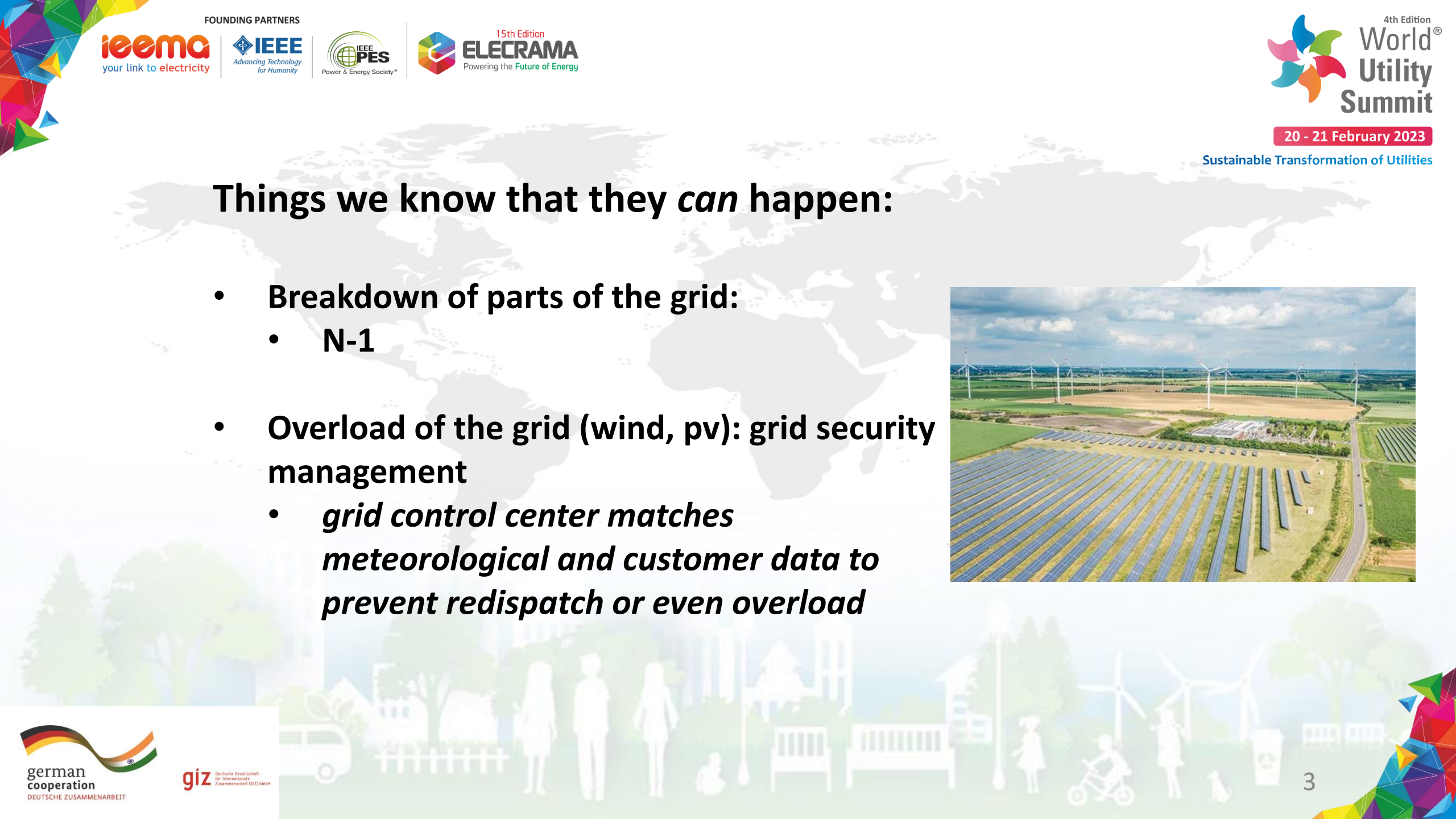
Dr. Matthias Dümpelmann
Managing Director
8KU GmbH Berlin





Resilience:

**...is not on things we know that they *can* happen.
...is not on things we know that they *might* happen.
...is on things we do not know yet and many people
will not even imagine that they might happen or
might happen together with other things.**

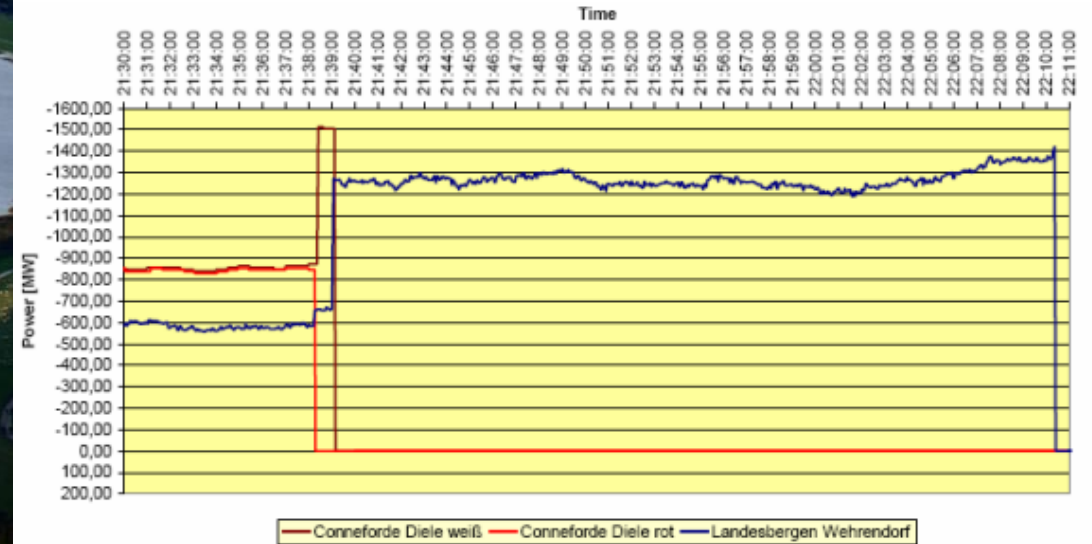


Things we know that they *can* happen:

- Breakdown of parts of the grid:
 - N-1
- Overload of the grid (wind, pv): grid security management
 - *grid control center matches meteorological and customer data to prevent redispatch or even overload*



What if not?



November 2006: Breakdown in Germany and parts of Europe

Things we know that they *might* happen:

- Catastrophic floods
 - Prevention
 - Protection
 - Sustainability



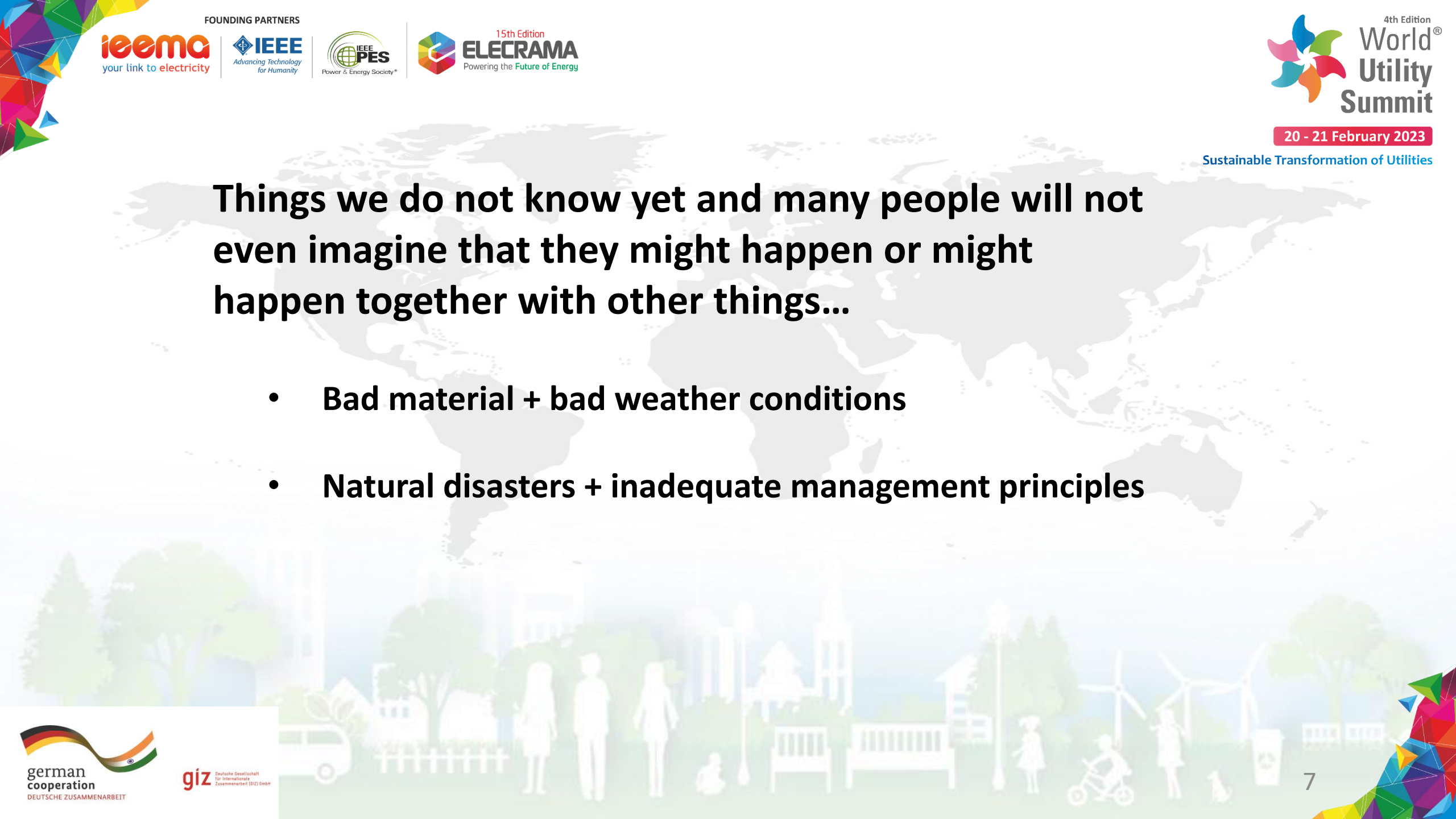


What if not?



July 2021: Flood Disaster





Things we do not know yet and many people will not even imagine that they might happen or might happen together with other things...

- **Bad material + bad weather conditions**
- **Natural disasters + inadequate management principles**



...may result in



**Dec 2005 Münsterland:
Wet, heavy snow and ice**

Fukushima





Learnings:

- **Climate change increases complexity and uncertainty of modern (industrial) society**
- **Prediction, prevention, protection, adaption are key**
- **Not to forget:**
 - **Sustainability**
 - **Social factors: awareness, responsibility, initiative**



Thank You

*For discussions/suggestions/queries email:
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