

OASC CxC Festival 2022, January 11-13.

Session "Standardisation Roundtable: How can standards deliver what cities and communities need?"

How can standards deliver what cities and communities need?

Dr. Lindsay Frost, Chief Standardisation Engineer, NEC Labs Europe GmbH

Vision NEC wants to achieve: Local Digital Twin Computing

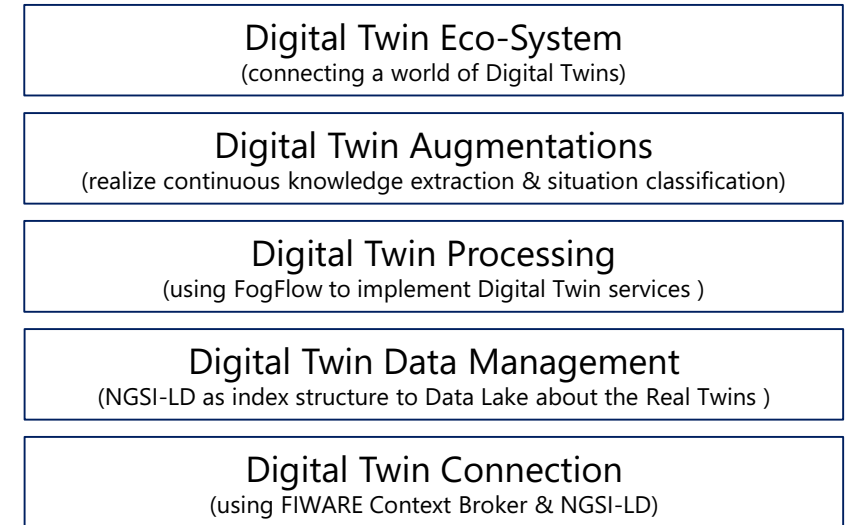
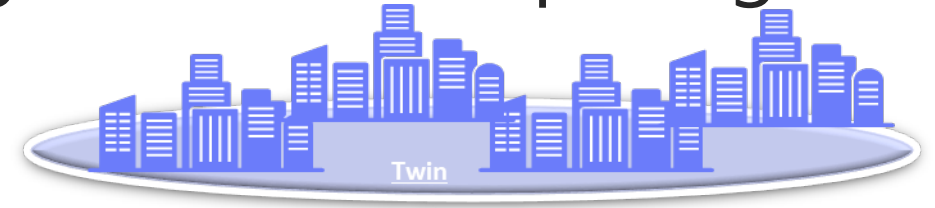
◆ Vision for 2030

- Digital Twins will represent every major element in the Smart City
- Overlay Digital Twin will combine the work of individual Digital Twins
- Digital Twins Computing creates the needed ubiquitous intelligence for the Green Transition

◆ Benefits of Digital Twin

- Insights – detailed understanding of activities in the Smart City
- Prediction – comprehensive forecasting
- Simulation – „what-if“ prediction
- Optimization – short/medium/long term optimizations

◆ ***All facilitated by interoperable standards and open-source software***



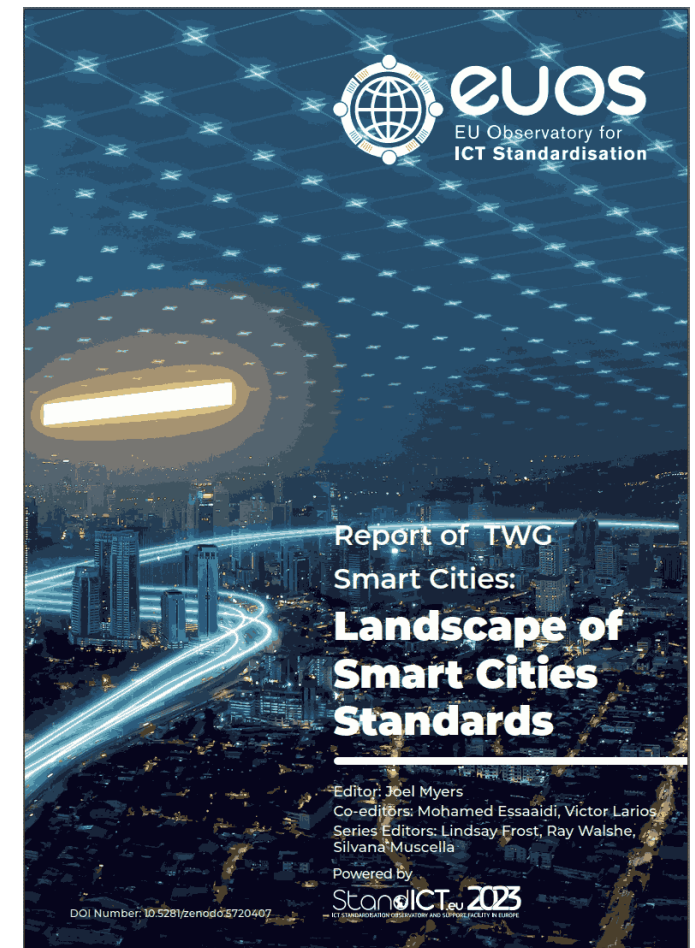
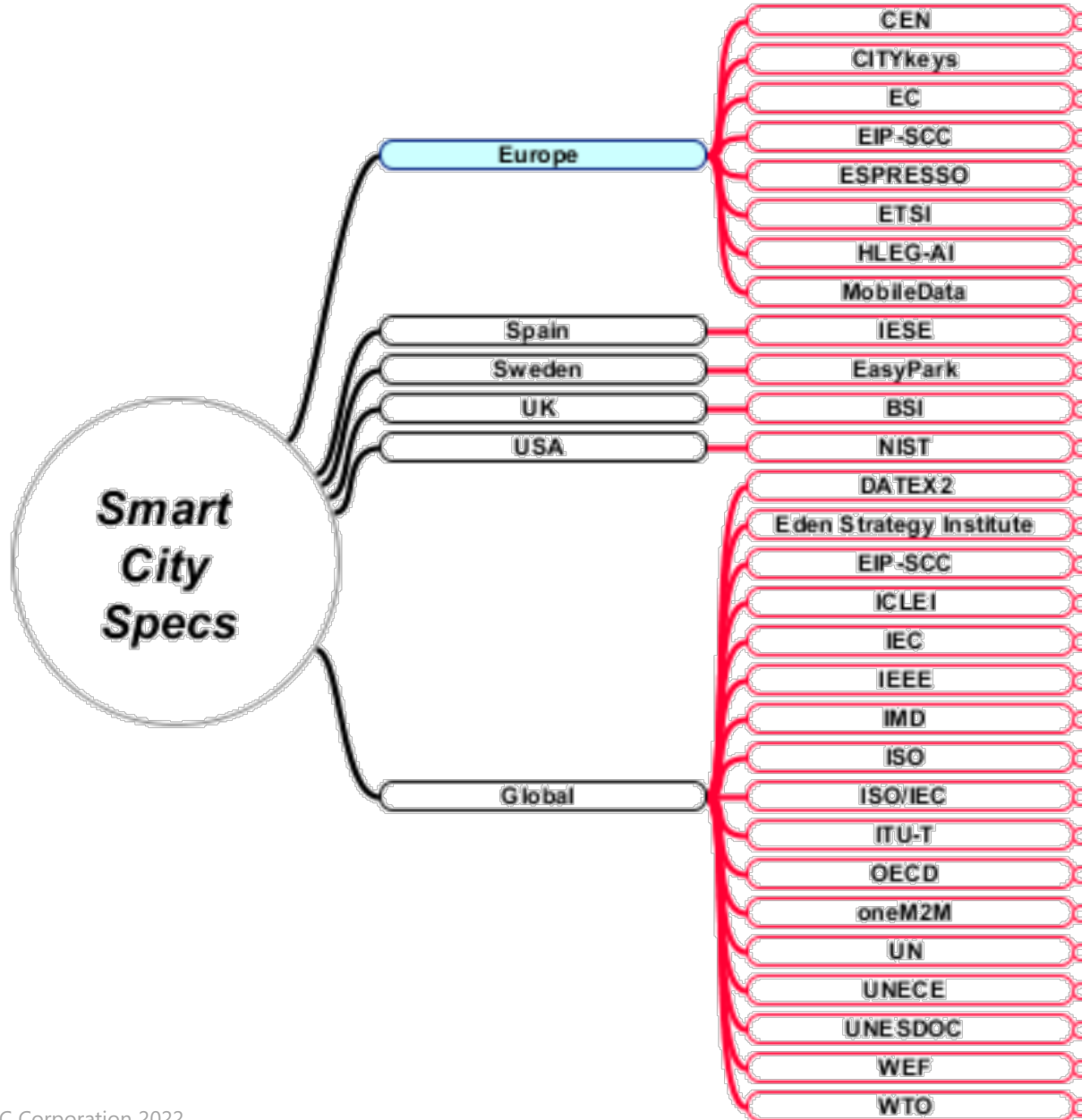
For Cities, data really is "*the new oil*"

- ◆ Data is needed to grease the wheels of all operations, all departments
- ◆ Data is needed to add energy and synergy to operations and services
- ◆ Data is needed as "raw source material" to make high-end services like: optimized car-parking, recommended plan-ahead energy balancing, ...
- ◆ ***But Data needs structure and quality (otherwise it is just "polluted")***

But cities need more ...

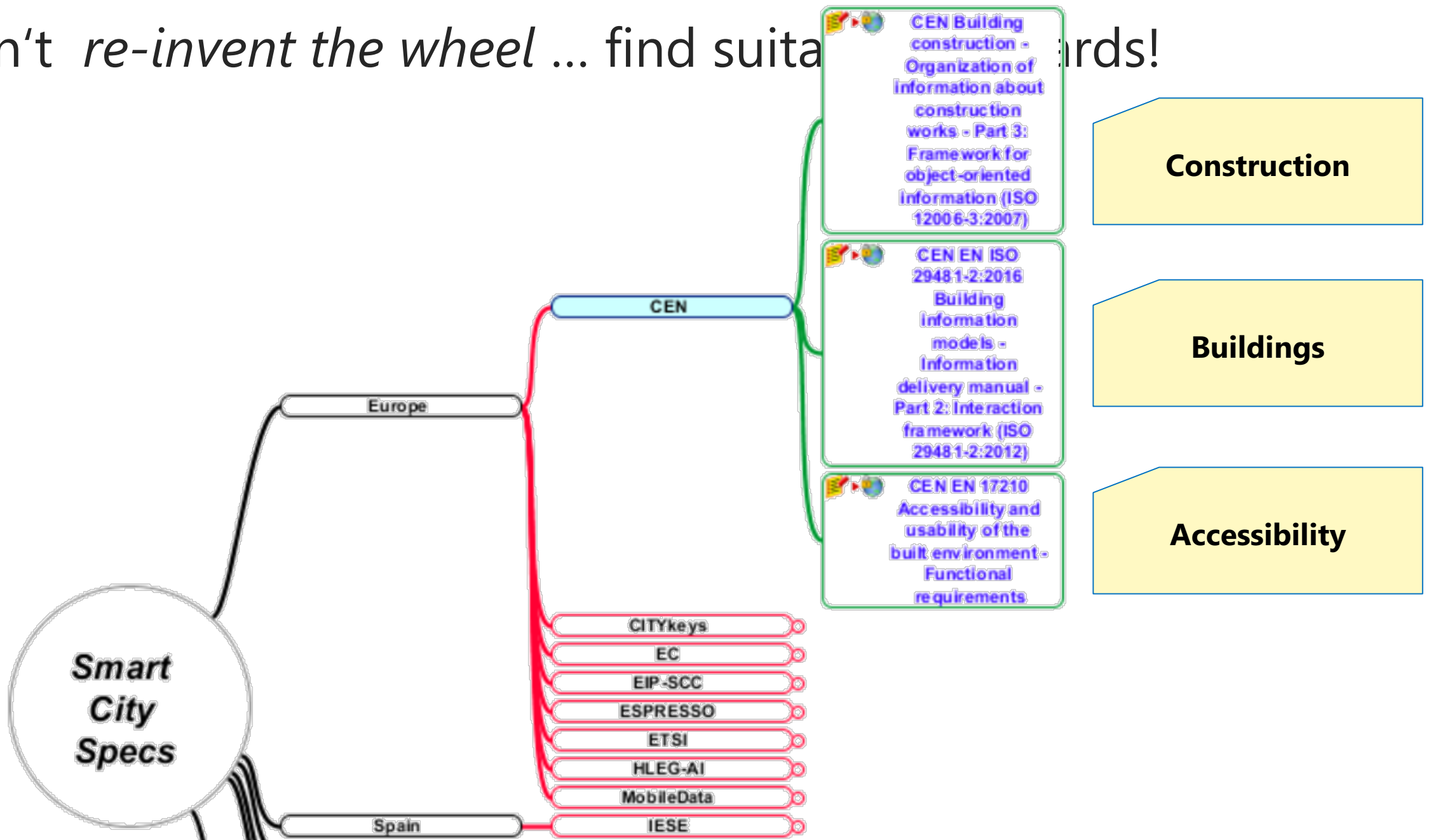
- ◆ **Guidelines** for best practise in modelling the real world
- ◆ **Standards** for transparent processes for government and businesses
- ◆ **Common “dictionaries”** for things, properties, measurements
- ◆ **Clear KPIs** for benchmarking UN SDGs and to track improvements
- ◆ **Don't *re-invent the wheel*** ... find suitable standards!

Don't *re-invent the wheel* ... find suitable standards!

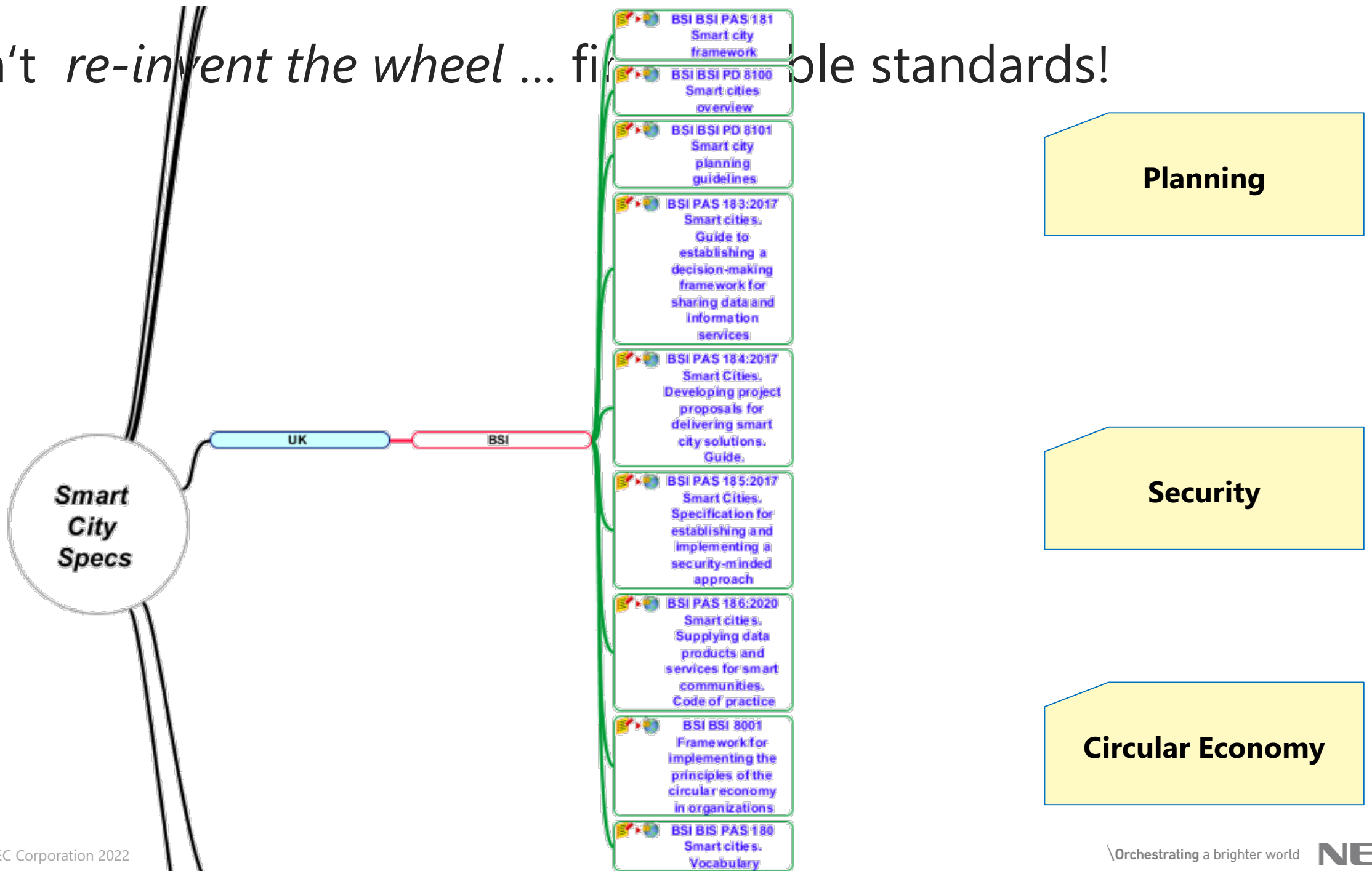


<https://zenodo.org/record/5785688#.Yd3tl2jMlyE>

Don't *re-invent the wheel* ... find suitable standards!

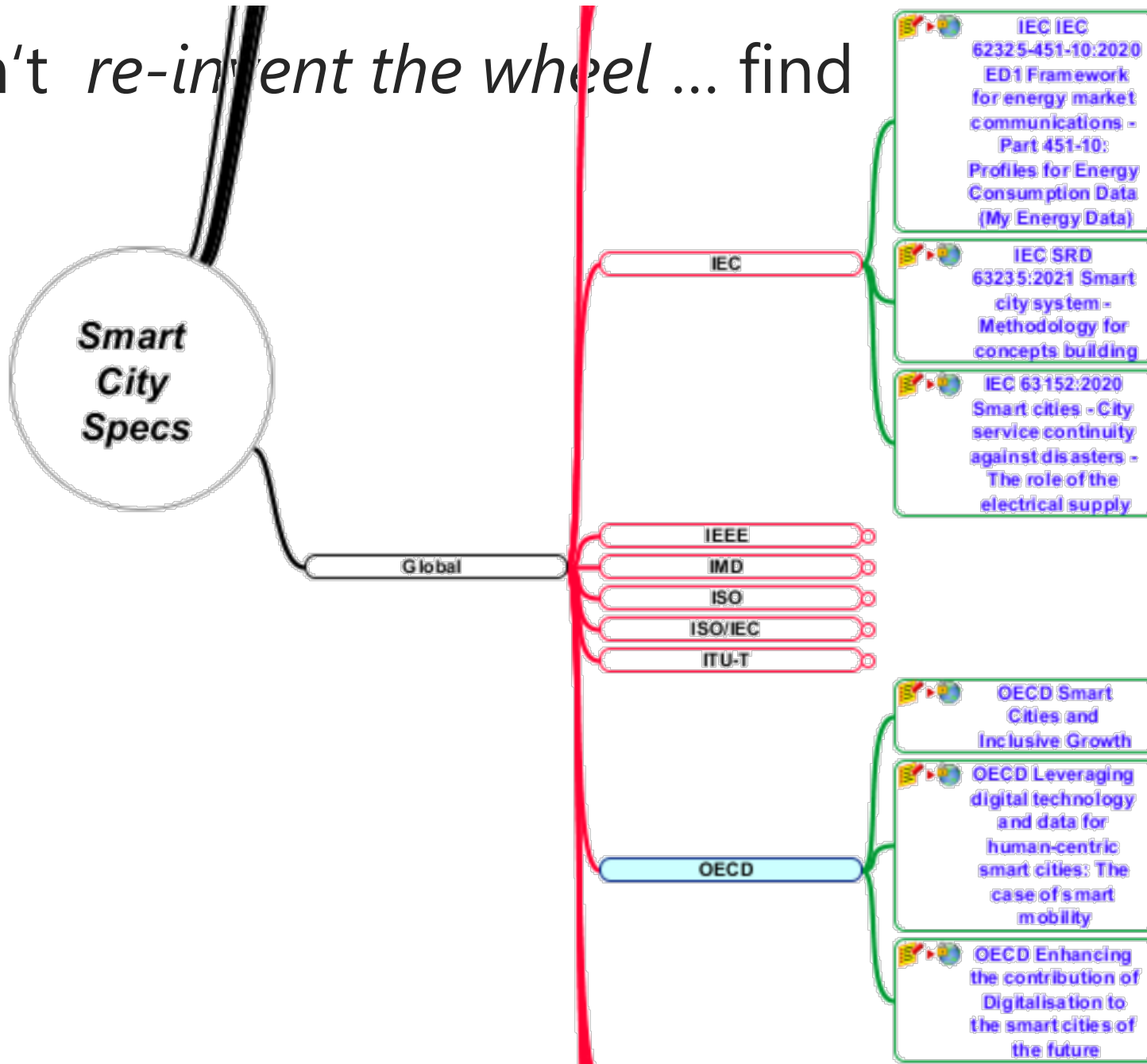


Don't *re-invent the wheel* ... find multiple standards!



Don't *re-invent the wheel* ... find

standards!



My Energy

Disaster Handling

Mobility

Smart Cities should ...

- ◆ ... remain flexible through interoperable and open standards
- ◆ ... leverage open-source to reduce lock-in
- ◆ ... get the data pumps running
- ◆ ... don't *re-invent the wheel* ... find suitable standards!

\Orchestrating a brighter world

NEC creates the social values of safety, security, fairness and efficiency to promote a more sustainable world where everyone has the chance to reach their full potential.