



ELISA
Enabling **Linux** in
Safety Applications

WORKSHOP

Drawing an open source safety-critical landscape

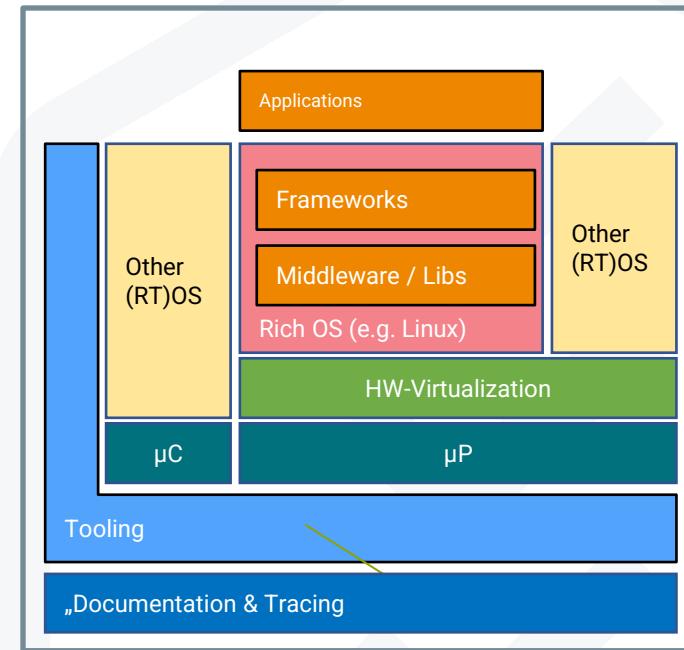
Philipp Ahmann, ETAS GmbH, ELISA TSC chair



Motivated by the Systems WG activities

- Requirement tools
- Documentation frameworks
- Traceability tools
- Testing frameworks
- Build tooling
- Compiler
- Hypervisor
- (RT)OS
- Container
- Middleware
- Frameworks
- IDEs
- ...

Projects
&
Foundations



Example of the safety open source landscape ... spot check



Landscape example

The screenshot displays the LF Energy Landscape interface, which is a visual representation of various open source projects across different energy sectors. The interface is organized into several sections:

- Header:** Includes the LF ENERGY Landscape logo, navigation tabs (EXPLORE, STATS), a search bar ("Type [] to search items"), and zoom controls.
- Filters:** A sidebar on the left lists categories: Transmission, Modeling and Simulation, Operations, Grid Edge, Grid Automation, Data & IoT, and Distribution. Under Transmission, there are sub-sections for Modeling and Simulation and Data & IoT.
- Project Categories:** Projects are categorized by status: EARLY ADOPTION, INCUBATING, WORKING GROUP, and SANDBOX.
- Projects:** A grid of project cards, each with a logo and name. Projects include:
 - Transmission:** POWSYBL, Dynawo, OpenSTEF, grid2op, GridFM, GridVantage.
 - Modeling and Simulation:** GFx, Fledge Power, RTDIP.
 - Operations:** OperatorFabric, Shapeshifter, CDS Power Systems Data, TROLIE.
 - Grid Edge:** OPENDSM, GEISA, OpenSynth.
 - Grid Automation:** SEAPATH, CoMPAS.
 - Data & IoT:** CDS Customer Data, CDS Registration.
 - Distribution:** OpenSTEF, POWER GRID MODEL, grid2op, GridFM, GridVantage, ARRAS.
 - Operations:** OPERATORFABRIC, SOGNO, SHAPESHIFTER, openLEADR, POWER GRID MODEL.
 - Data & IoT:** GFx, Fledge Power, RTDIP.

<https://github.com/Lf-energy/lfenergy-landscape>

The tool to create a landscape

```
- category:  
  name: Renewable Energy  
  subcategories:  
    - subcategory:  
      name: Photovoltaics and Solar Energy  
      items:  
        - item:  
          name: A Global Inventory of Commerical-, Industrial-, and Utility-Scale Photovoltaic Solar Generating Units  
          description: Used to produce a global inventory of utility-scale solar photovoltaic generating station.  
          homepage_url: https://github.com/Lkruitwagen/solar-pv-global-inventory  
          repo_url: https://github.com/Lkruitwagen/solar-pv-global-inventory  
          logo: A Global Inventory of Commerical-, Industrial-, and Utility-Scale Photovoltaic Solar Generating Units.svg  
          extra:  
            refs: ',https://zenodo.org/record/5005868,https://zenodo.org/record/5005868'  
          organization:  
            name: Lucas Kruitwagen  
        - item:  
          name: autoxrd  
          description: a python package for automatic xrd pattern classification of thin-films, tweaked for small and class-imbalanced datasets.  
          homepage_url: https://github.com/pv-lab/autoxrd  
          repo_url: https://github.com/pv-lab/autoxrd  
          logo: autoxrd.svg  
          extra:
```

Structured in Yaml

Category:

```
name: (repeats)
subcategories:
items:
  description:
  homepage:
  repo_url:
  logo:
  extras:
  organizations:
...
...
```

More entries:

- additional_repos
- project
- accepted
- annotations
- ...

Mapping things:

Category	Transmission	Modeling and Simulation 						Subcategory	Logo Name Links
		 POWSYBL	 DynaWo	 OpenSTEF	 grid2op	 GridFM	 GridVantage		
Operations		 OPERATORFABRIC	 ShapeShifter	 CDS Power Systems Data	 TROLIE				
		EARLY ADOPTION	INCUBATING	WORKING GROUP	WORKING GROUP				
Distribution		Modeling and Simulation 							
		 OpenSTEF	 POWER GRID MODEL	 grid2op	 GridFM	 GridVantage	 ARRAS		
		INCUBATING	INCUBATING	SANDBOX	SANDBOX	SANDBOX	SANDBOX		

Possibilities for fields...

- Categories: ...
- Attributes: ...

Ready to make it visible (together)

- The PR: <https://github.com/elisa-tech/wg-systems/pull/18/files>
- Collaborative editing md: <https://mensuel.framapad.org/p/elisa-oss-landscape>
- Directly as yaml: <https://rustpad.io/#wWNzSq>

MD:



yaml:



A dark gray background featuring a complex network graph composed of numerous small white dots (nodes) connected by thin white lines (edges). The nodes are scattered across the frame, creating a sense of depth and connectivity.

Thank you



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