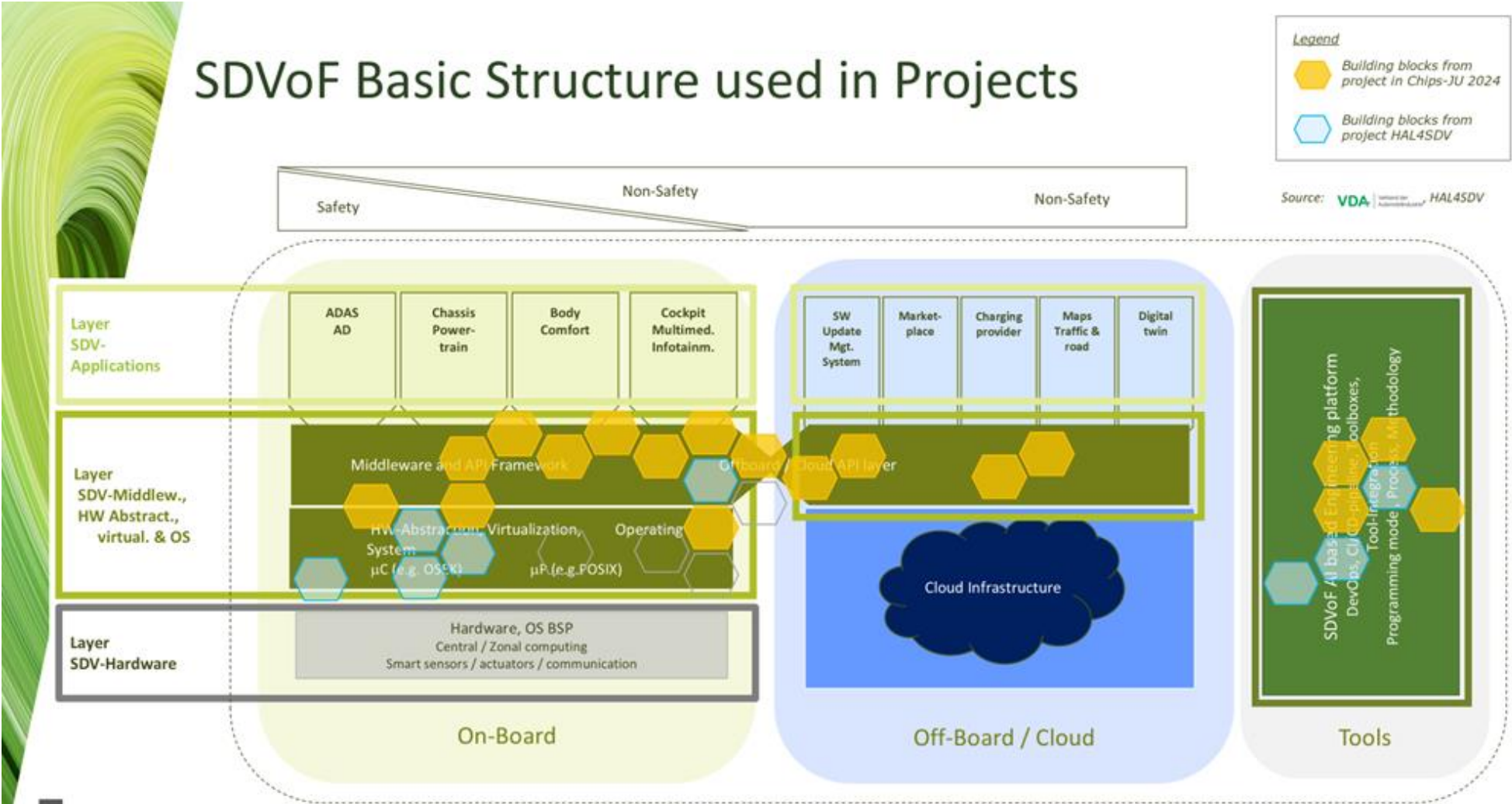**FEDERATE BB Repository & SDVoF vision**

Mario Driussi
Munich | 2025 05 20

Agenda

- SDVoF vision
  - Motivation & Current Situation
  - FEDERATE SDVoF vision and Github

- What We Offer - and What We Expect

- FEDERATE approach & Github Repository
  - Live visit

SDVoF vision

SDVoF Basic Structure used in Projects

Motivation & Current Situation

Curren...

- Github Stats from 2023 (source: https://en.wikipedia.org/wiki/GitHub)
  - ~ 100 Million Developers
  - ~ 420 Million Repos
  - ~ 28 Million Public Repos

  Number of Problems solved?

- Automotive context
  - Serveral Repos on different Hosts, Gihub, Gitlab, Bitbucket, Gitee, atomgit,...
- Overview ?
- Harmonization ?
- Collaboration ?
- ...

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OS-Things

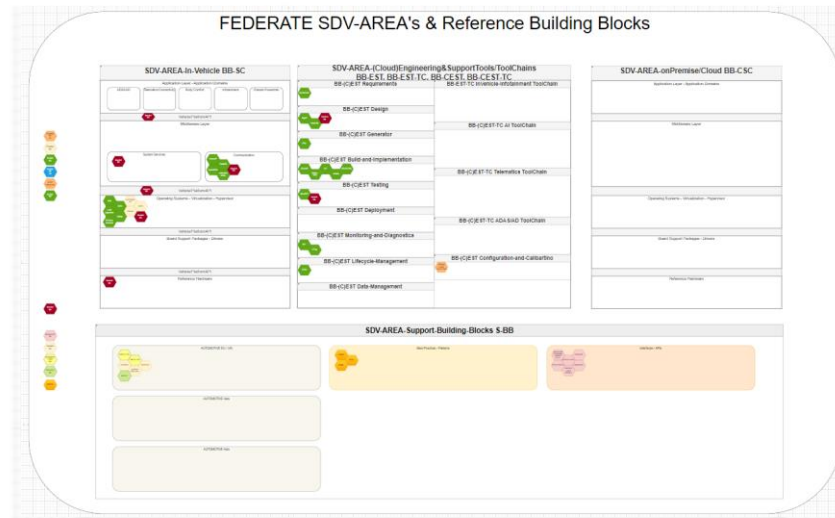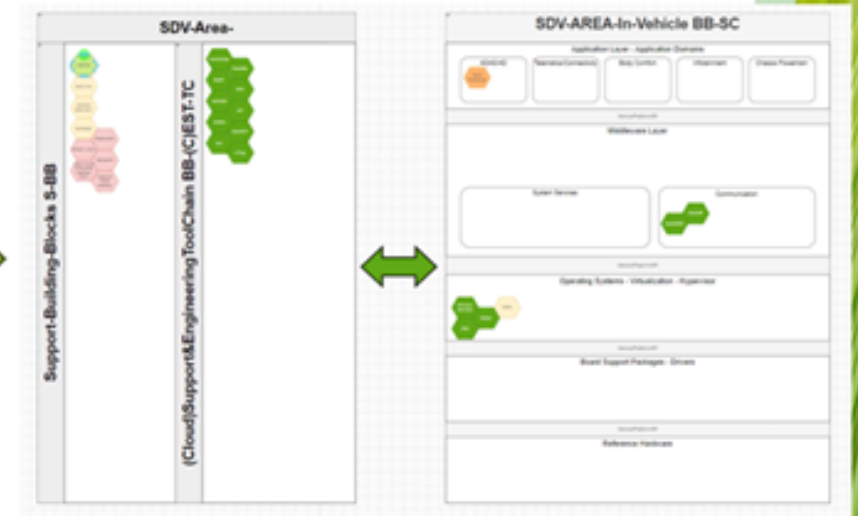ore-ai/SDV

ps://githu
om/coves
a

SDVoF vision

Collected BB-Descriptions in the structured GitRepo

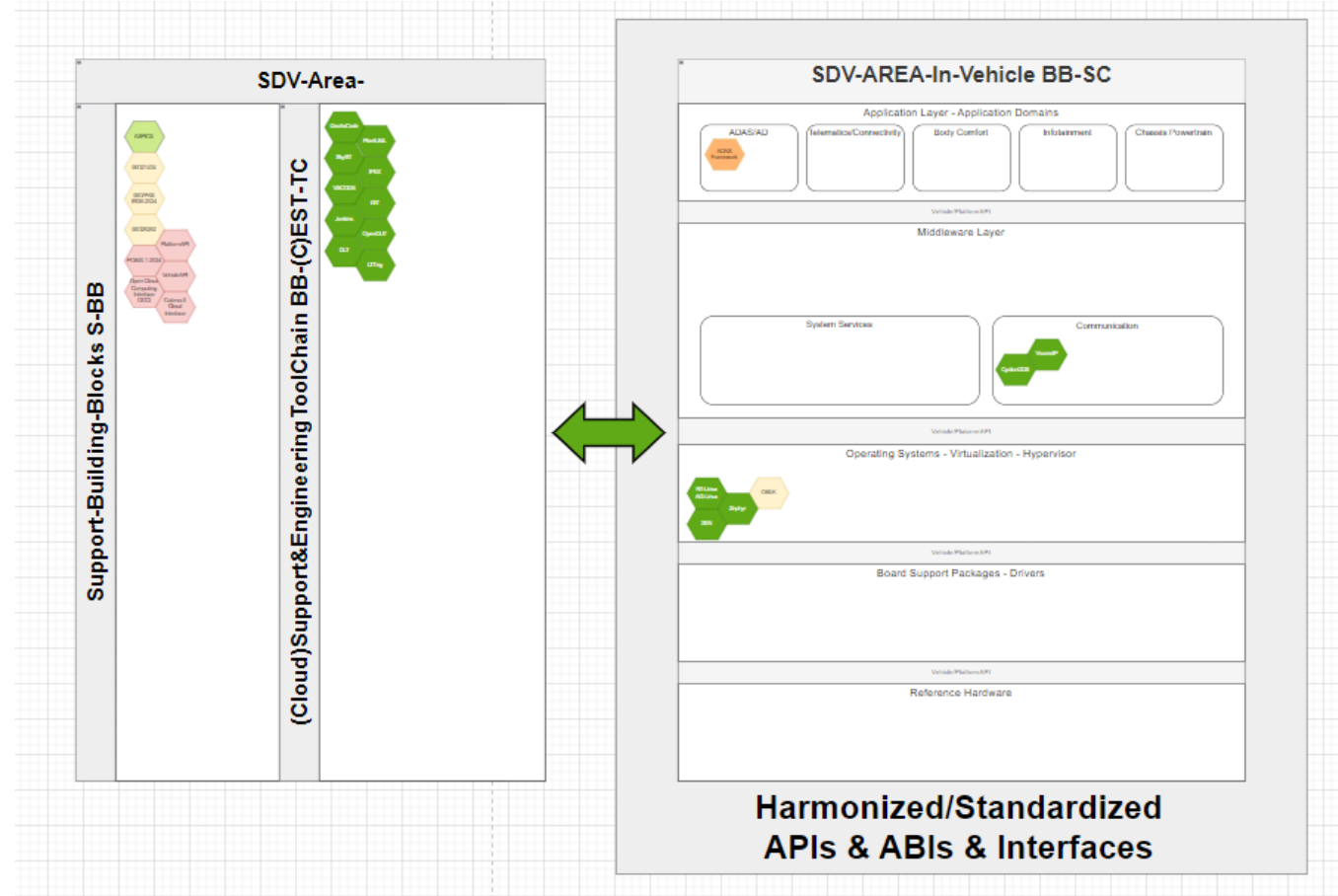Collected of BB-Descriptions mapped into the Reference Areas and Architectures

Selected BB-Descriptions with implementions (Tools, Processes, APIs, aligned Standards, Stack-Components – executed as one instance of the Reference Core Stack
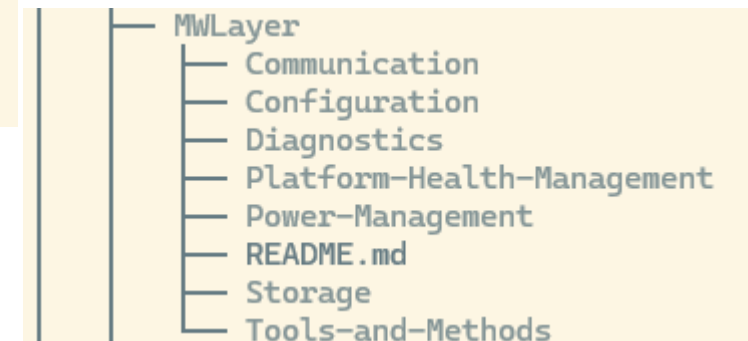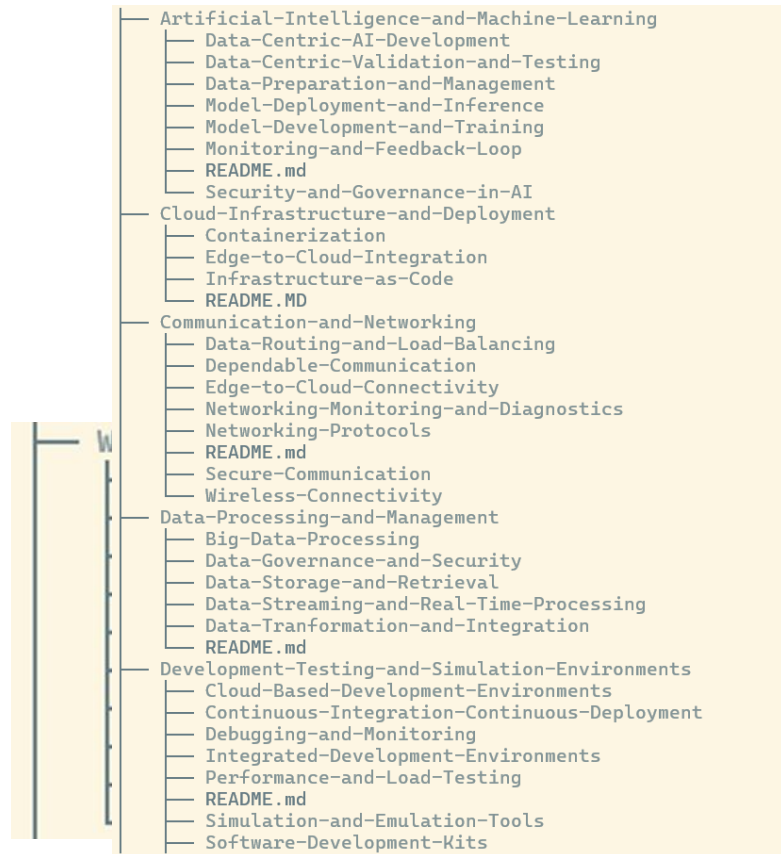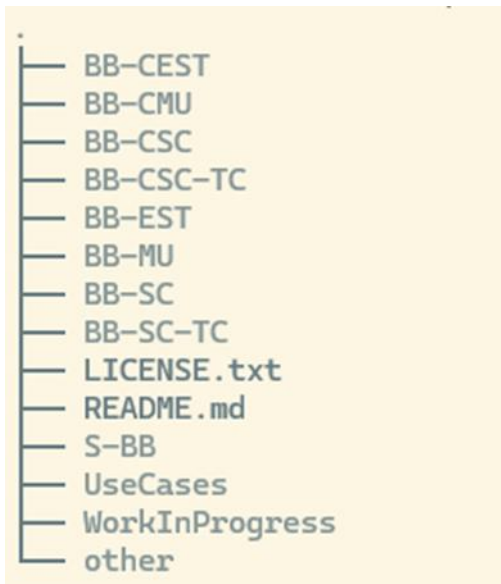

SDV Ecosystem Framework

SDVoF vision

"We offer a framework that enables stakeholders to connect and coordinate on APIs and Interface definitions."

What We Offer

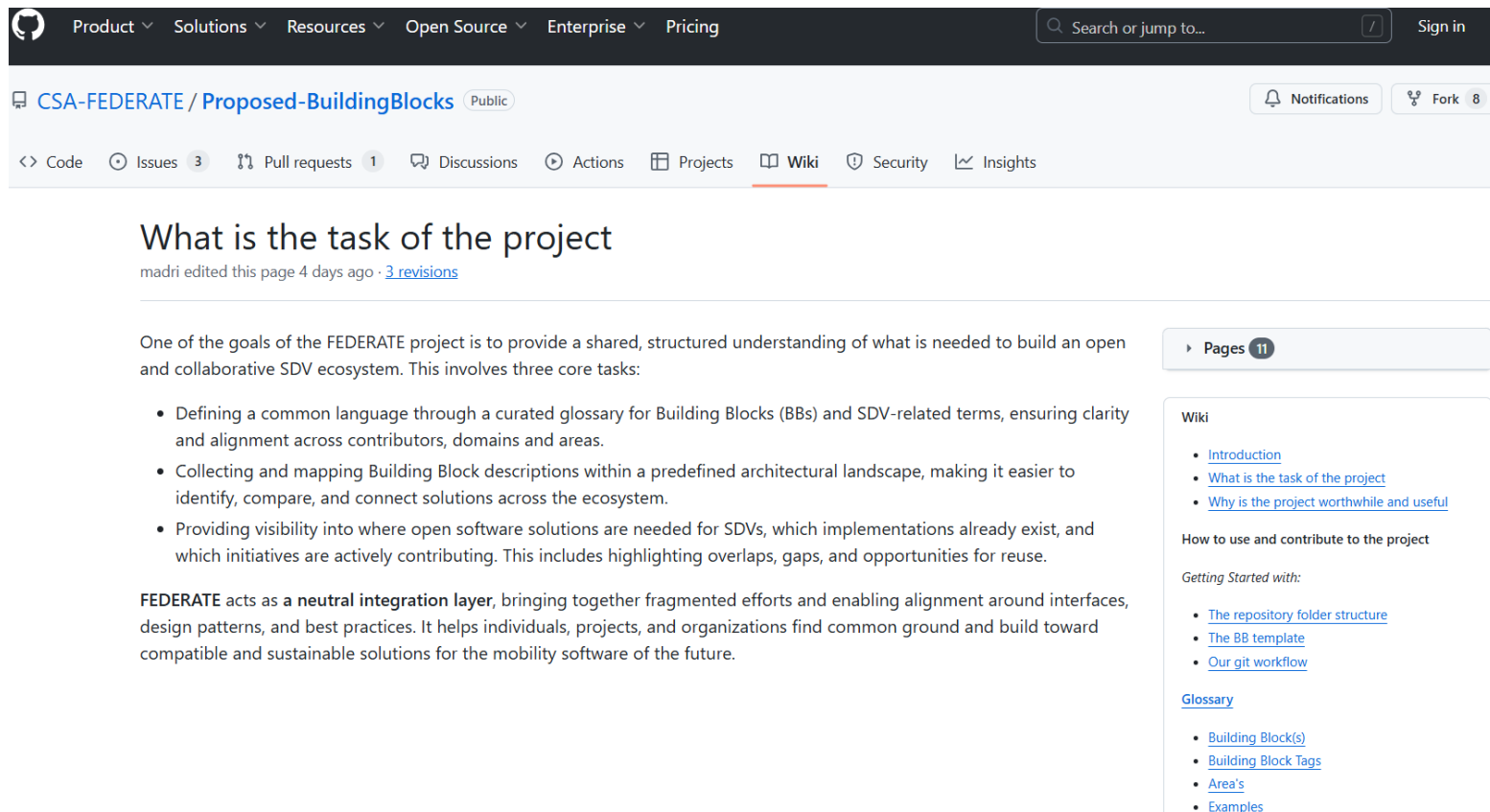- Github Repo „as a central hub for getting oriented and keeping track of the big picture" – aligned with our definitions and BB-Tags

```
.
├── BB-CEST
├── BB-CMU
├── BB-CSC
├── BB-CSC-TC
├── BB-EST
├── BB-MU
├── BB-SC
├── BB-SC-TC
├── LICENSE.txt
├── README.md
├── S-BB
├── UseCases
├── WorkInProgress
└── other
```

```
├── Artificial-Intelligence-and-Machine-Learning
│   ├── Data-Centric-AI-Development
│   ├── Data-Centric-Validation-and-Testing
│   ├── Data-Preparation-and-Management
│   ├── Model-Deployment-and-Inference
│   ├── Model-Development-and-Training
│   ├── Monitoring-and-Feedback-Loop
│   ├── README.md
│   └── Security-and-Governance-in-AI
├── Cloud-Infrastructure-and-Deployment
│   ├── Containerization
│   ├── Edge-to-Cloud-Integration
│   ├── Infrastructure-as-Code
│   └── README.MD
├── Communication-and-Networking
│   ├── Data-Routing-and-Load-Balancing
│   ├── Dependable-Communication
│   ├── Edge-to-Cloud-Connectivity
│   ├── Networking-Monitoring-and-Diagnostics
│   ├── Networking-Protocols
│   ├── README.md
│   ├── Secure-Communication
│   └── Wireless-Connectivity
├── Data-Processing-and-Management
│   ├── Big-Data-Processing
│   ├── Data-Governance-and-Security
│   ├── Data-Storage-and-Retrieval
│   ├── Data-Streaming-and-Real-Time-Processing
│   ├── Data-Tranformation-and-Integration
│   └── README.md
├── Development-Testing-and-Simulation-Environments
│   ├── Cloud-Based-Development-Environments
│   ├── Continuous-Integration-Continuous-Deployment
│   ├── Debugging-and-Monitoring
│   ├── Integrated-Development-Environments
│   ├── Performance-and-Load-Testing
│   ├── README.md
│   ├── Simulation-and-Emulation-Tools
│   └── Software-Development-Kits
```

```
├── MWLayer
│   ├── Communication
│   ├── Configuration
│   ├── Diagnostics
│   ├── Platform-Health-Management
│   ├── Power-Management
│   ├── README.md
│   ├── Storage
│   └── Tools-and-Methods
```

What We Offer

- "A wiki that helps you navigate key terms through a comprehensive glossary and clear definitions."

- and What We Expect

- We welcome contributions in the form of Building Block descriptions- "where projects, initiatives, or organizations publicly share the (open) software Building Blocks they are contributing to the digital mobility landscape, helping to strengthen and grow the SDVoF initiative."

```
> WorkInProgress
v other
  > figures
  > glossary
  > scripts
  > technical_description_container
  v utils
      Abbreviations.md
      BB_Implementation_guideline....
      BB_Template.md
      README_base.md
      structure.md
      structure_wip.md
  .gitignore
  LICENSE.txt
  README.md
```

```
14    <!-- example on how to use BB or link to documentation -->
15
16    ## Known Implementation
17
18    ## ID (unique name)
19
20    ## Description
21    <!-- General Description of the BB -->
22
23    ## Rationale
24    <!-- Explanation why we need the BB; what problem want to be solved -->
25
26  v ## Governance Applicable S-BB(s)
27    <!-- Reference to e.g. UN/EU CRA Cyber Resilience Act; UNECE 156 - Software update and software update management system
28    Reference to defined S-BB(s)
29    Reference to e.g. ISO26262, AUTOSAR Spec. X -->
30
31  v ## Compose BB(s)
32    <!-- Link to required BB(s)
33    E.g. BB-SC StateManagement
34    BB is a composition of other BBs -->
35
36    ## What is needed to Design and Implement
37    <!-- e.g. we expect to have a certain HW capability and or SW environment or Tool support, or a documentation, or an extra
38
```

FEDERATE approach

- **A detailed look at our approach:**
  - A wiki with consistent terminology and clear definitions for Building Blocks (BBs), BB-Tags, and Areas.
  - A structured repository aligned with our reference architecture and terminology.
  - A ready-to-use BB_Template to guide your contribution.

FEDERATE Github Repo

- https://github.com/CSA-FEDERATE?tab=repositories

Thank you for your attention! Quesitons?

FEDERATE

Thank You

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