How to organize an OpenSource project
MUG-Meeting

Dr. Tobias Opialla

2021-12-01

Outline

0. Open vs Closed Source

1. What is OpenSource

2. Why is OpenSource necessary in regulatory frameworks?

3. Why is OpenSource helpful in an ecosystem?

4. The structure of an OpenSource project

5. What would it mean for you

6. Voting

Open vs Closed Source

Software is freely distributed	Software is sold
Skills and people have to be coordinated	One stop shop
Running the software has to be organized, but on premise	Software as a Service
Every stakeholder can (let) create new features,	Centralized development by one vendor
It is clear how it works	No way to actually know, how it works
No vendor lock-in	If vendor discontinues the product, it dies
No secret Exploits	More security risks

Open source comes from science, where methods and outcomes are shared and described

What is Open Source?

OpenSource Software

- The tools to work with data
- Everyone can see how the tools work
- Everyone can build on the work of others
- Everyone may add needed functionalities (with governance!)

Open Data Standard

- Includes Data Ontologies
- Ensures Meaningful Annotation
- Ensures useful data exchange
- Everyone may add additional fields (with governance!)

Open Data/ FAIR Data

- Freely accessible data
- Meaningfully annotated data
- Interoperable (standardised) data
- Reusable in future additional questions

Some well known examples

- Firefox

- Chrome

- Android

- MySQL

- "The Internet"

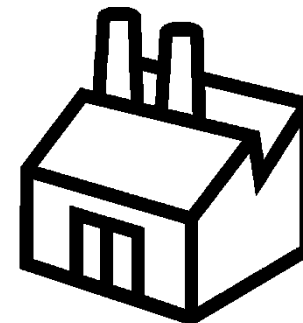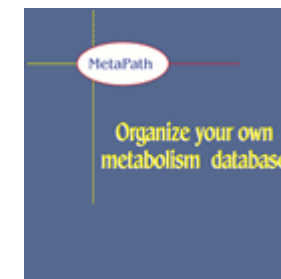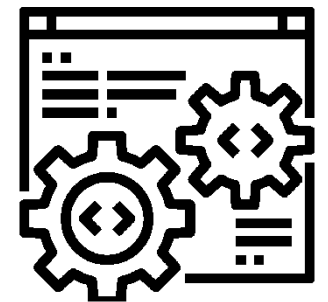# Why is Open Source a necessity in regulatory frameworks?

Code is law

- Software is used to aid decisions
- Decisions have to be transparent

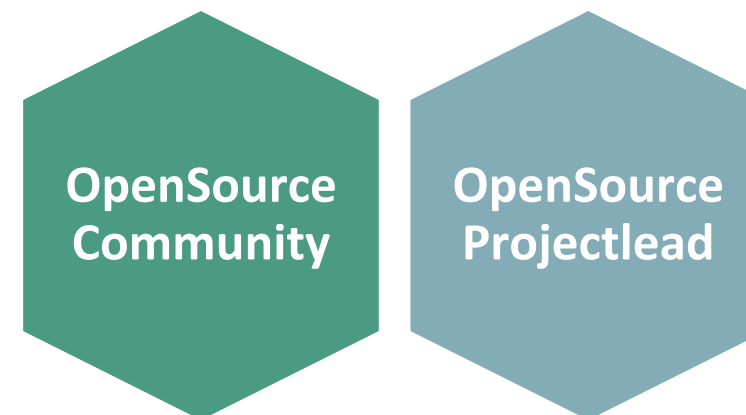# Why is OpenSource helpful in an Ecosystem?

Only the German side

- Many different tools on the market
- Many different players and stakeholders
- Many different levels of processes
- All has to work together
- One can find the specification one needs to know just by reading it.

ME TRYING
TO FIT IN
imgflip.com

OECD

Federal Office of Consumer Protection and Food Safety

BfR

JKI
Julius Kühn-Institut

BAM
Bundesanstalt für Materialforschung und -prüfung

efsa
European Food Safety Authority

ECHA
EUROPEAN CHEMICALS AGENCY

Umwelt Bundesamt

baua:
Federal Institute for Occupational Safety and Health

QSAR TOOLBOX

MetaPath
Organize your own metabolism database

IUCLID 6

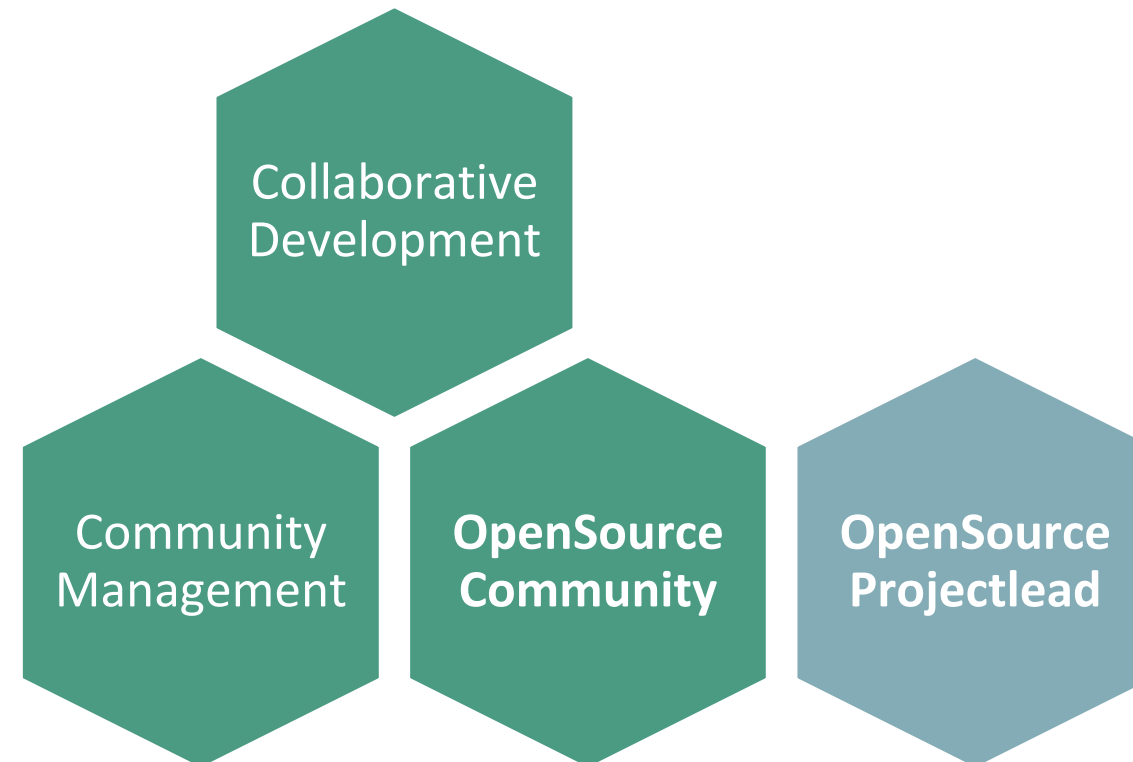Plant Protection Products Application Management System

The Structure of an Open Source Project?

- Project lead (OECD? EFSA?)
  - Management/Governance
  - Members Committee
- Community
  - Authorities
  - Applicants
  - NGOs
- Rules
  - Code of conduct
  - Contributor license agreement
  - Coding Styles
  - Frameworks
- Issues
  - Bugs
  - New features
- Wiki
  - Growing documentation

OpenSource Community

OpenSource Projectlead

The Structure of an Open Source Project?

- **Project lead (OECD? EFSA?)**
  - Management/Governance
  - Members Committee
- **Community**
  - Authorities
  - Applicants
  - NGOs
- **Rules**
  - Code of conduct
  - Contributor license agreement
  - Coding Styles
  - Frameworks
- **Issues**
  - Bugs
  - New features
- **Wiki**
  - Growing documentation

Collaborative
Development

Community
Management

**OpenSource
Community**

**OpenSource
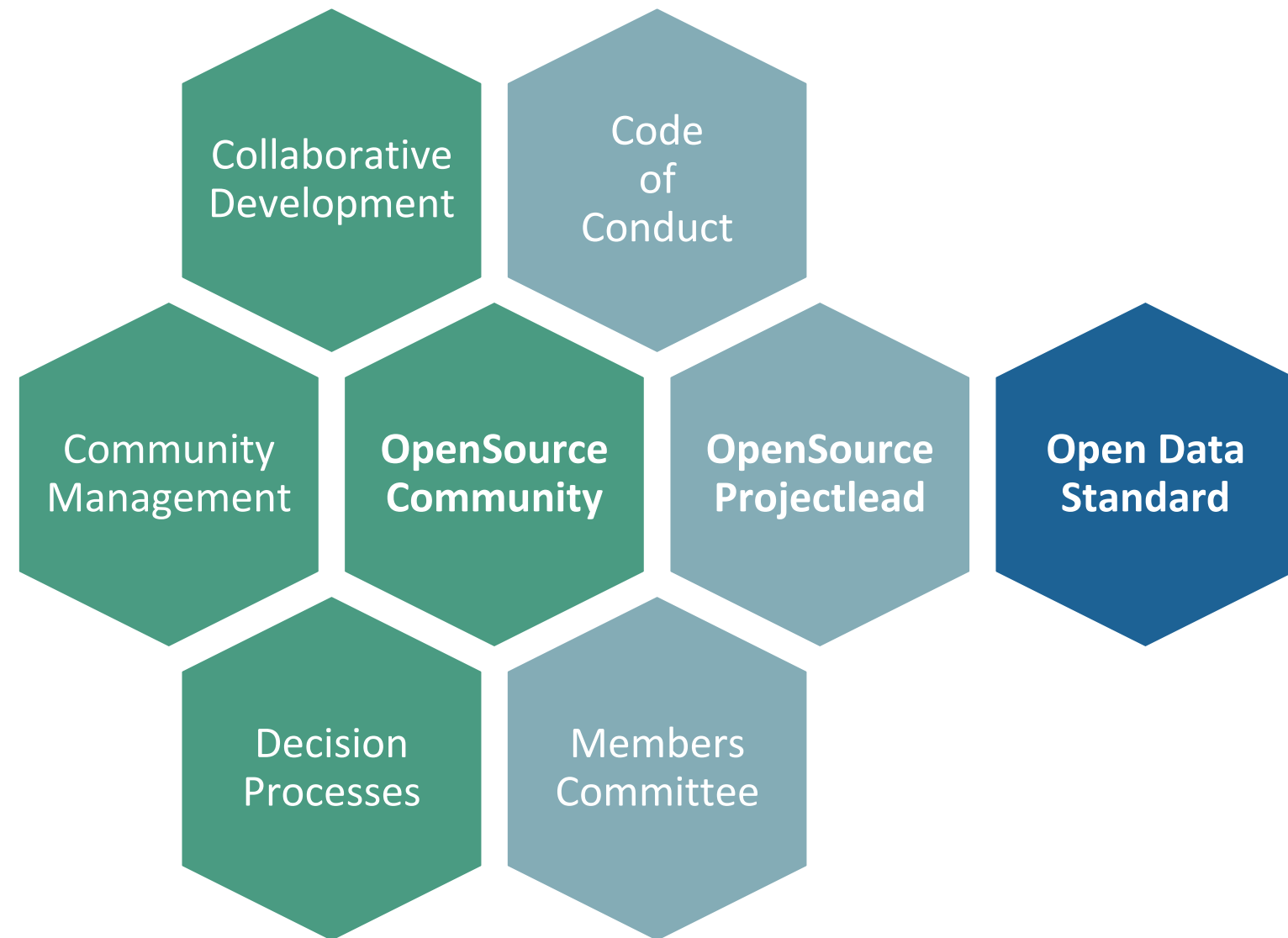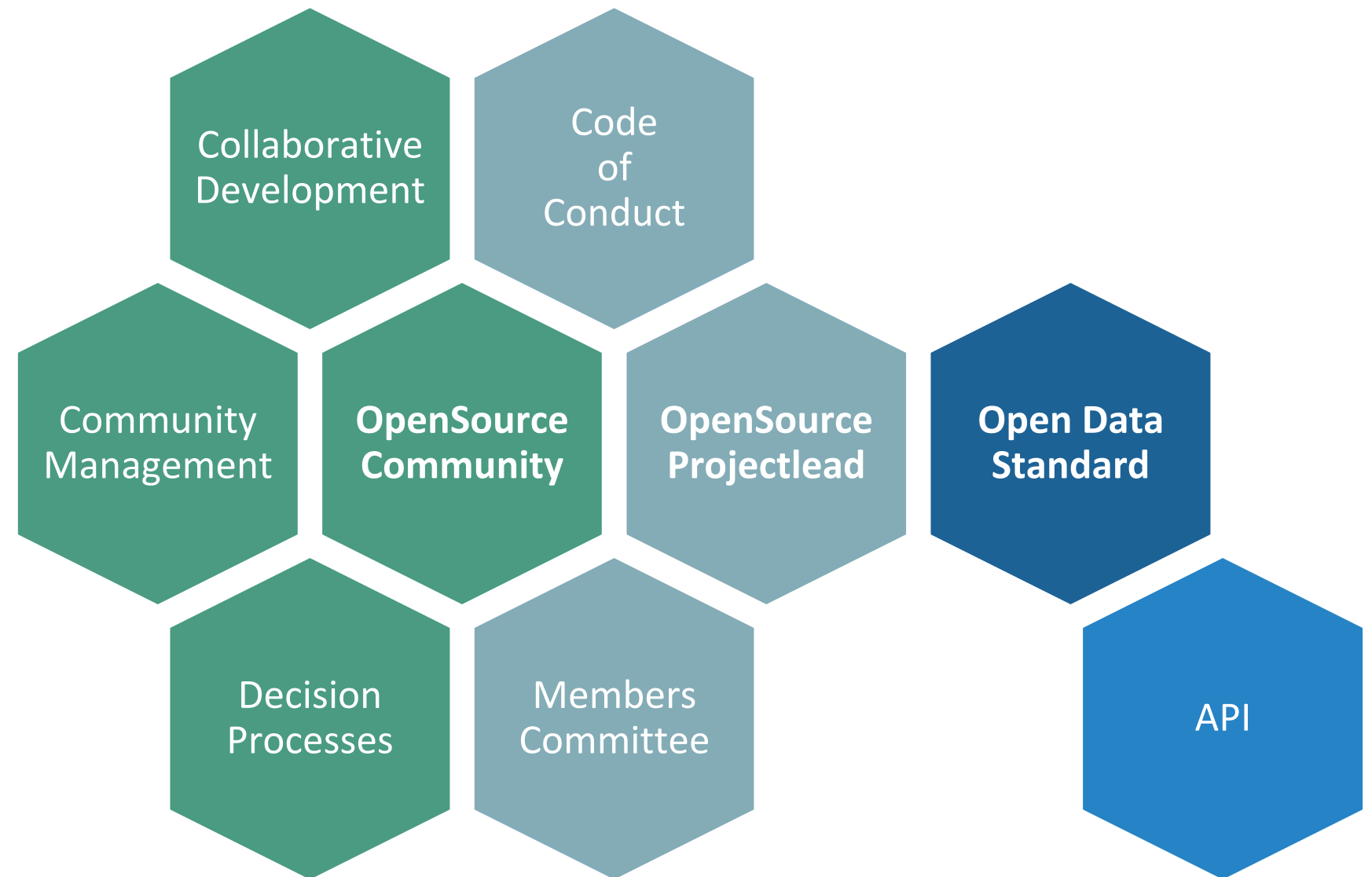Projectlead**

The Structure of an Open Source Project?

- Project lead (OECD? EFSA?)
  - Management/Governance
  - Members Committee
- Community
  - Authorities
  - Applicants
  - NGOs
- Rules
  - Code of conduct
  - Contributor license agreement
  - Coding Styles
  - Frameworks
- Issues
  - Bugs
  - New features
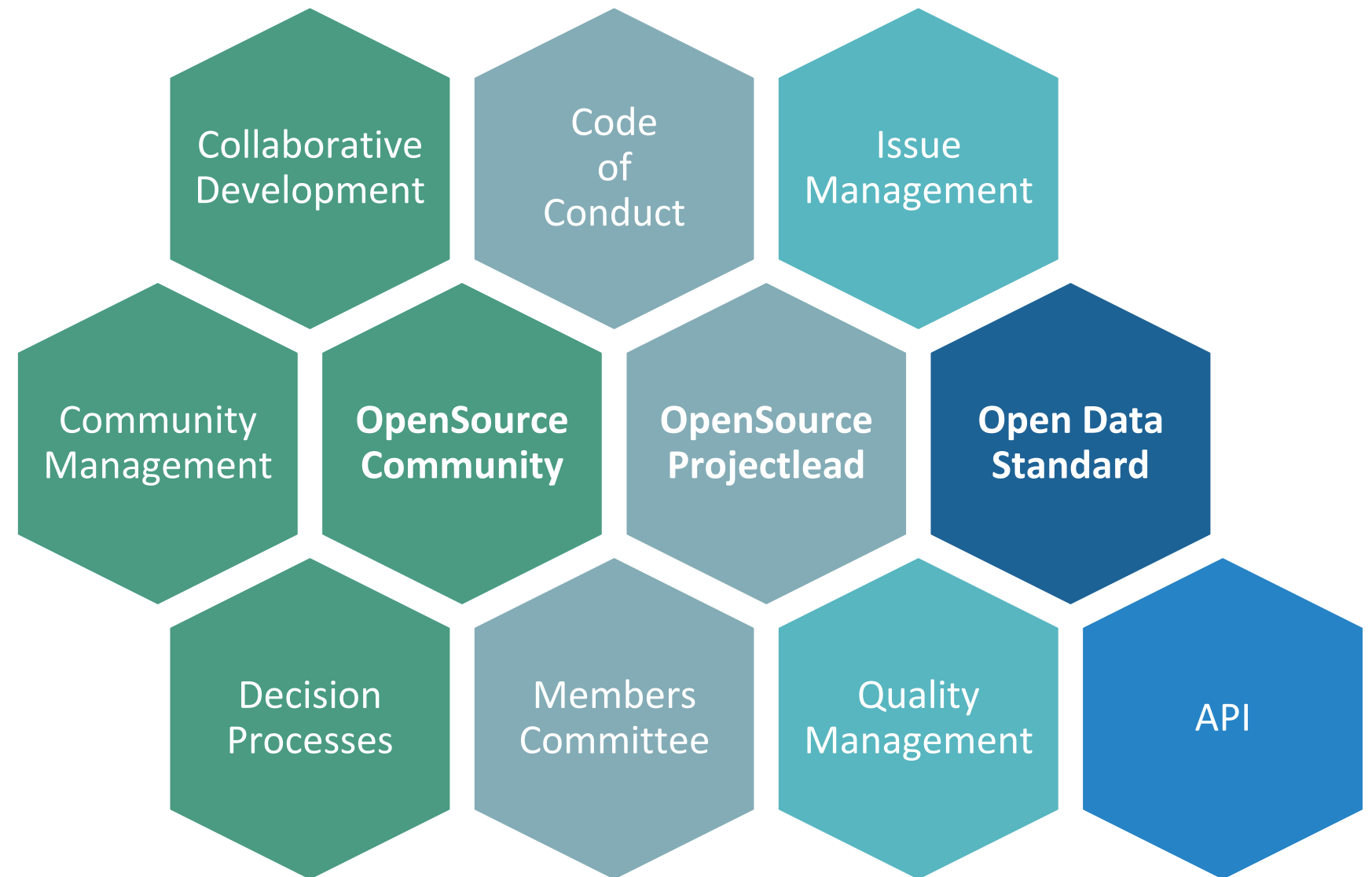- Wiki
  - Growing documentation

The Structure of an Open Source Project?

- Project lead (OECD? EFSA?)
  - Management/Governance
  - Members Committee
- Community
  - Authorities
  - Applicants
  - NGOs
- Rules
  - Code of conduct
  - Contributor license agreement
  - Coding Styles
  - Frameworks
- Issues
  - Bugs
  - New features
- Wiki
  - Growing documentation

Collaborative Development

Code of Conduct

Community Management

OpenSource Community

OpenSource Projectlead

Open Data Standard

Decision Processes

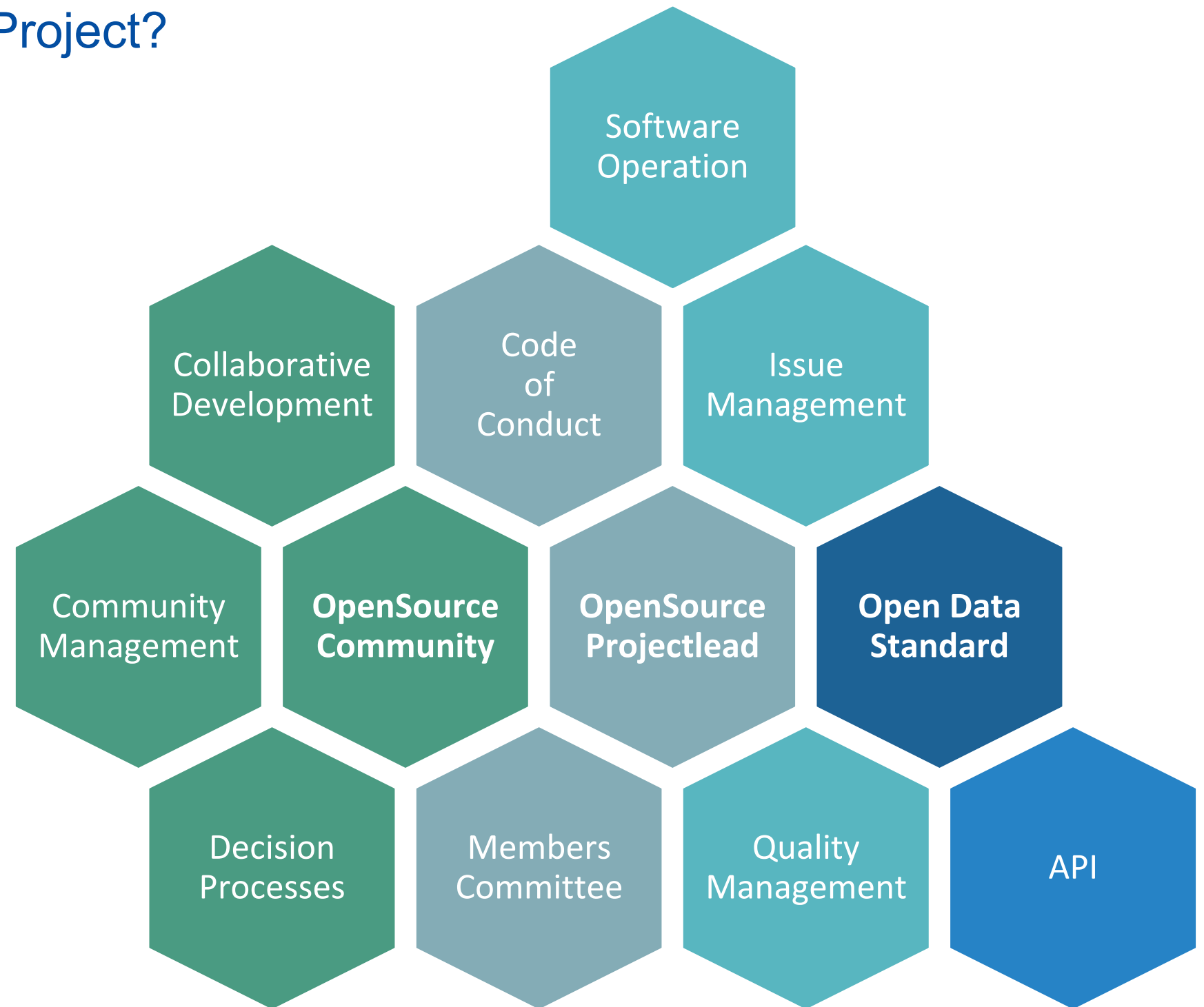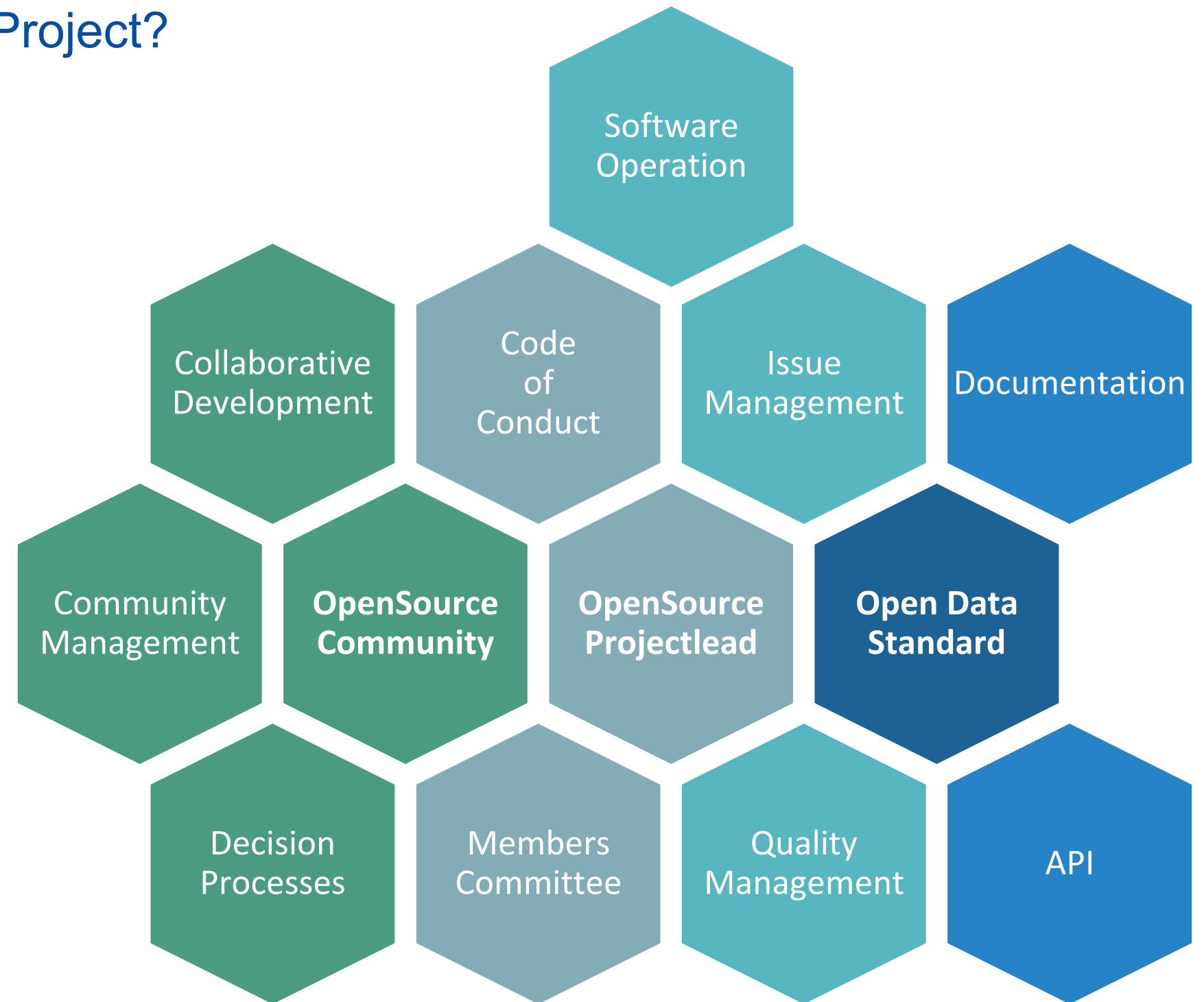Members Committee

API

BfR

The Structure of an Open Source Project?

- Project lead (OECD? EFSA?)
  - Management/Governance
  - Members Committee
- Community
  - Authorities
  - Applicants
  - NGOs
- Rules
  - Code of conduct
  - Contributor license agreement
  - Coding Styles
  - Frameworks
- Issues
  - Bugs
  - New features
- Wiki
  - Growing documentation

The Structure of an Open Source Project?

- **Project lead (OECD? EFSA?)**
  - Management/Governance
  - Members Committee

- **Community**
  - Authorities
  - Applicants
  - NGOs

- **Rules**
  - Code of conduct
  - Contributor license agreement
  - Coding Styles
  - Frameworks

- **Issues**
  - Bugs
  - New features
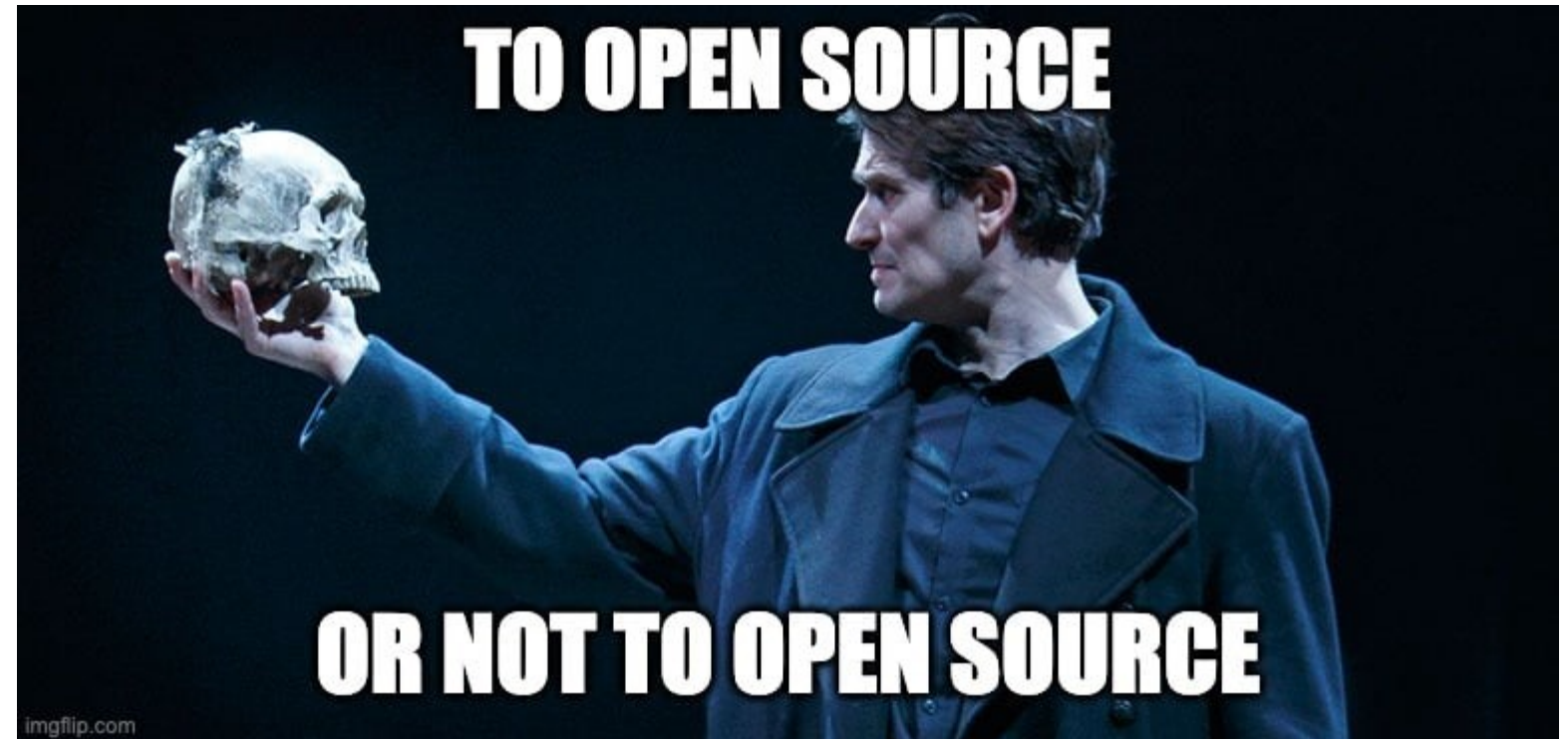
- **Wiki**
  - Growing documentation

The Structure of an Open Source Project?

- **Project lead (OECD? EFSA?)**
  - Management/Governance
  - Members Committee
- **Community**
  - Authorities
  - Applicants
  - NGOs
- **Rules**
  - Code of conduct
  - Contributor license agreement
  - Coding Styles
  - Frameworks
- **Issues**
  - Bugs
  - New features
- **Wiki**
  - Growing documentation

What would it mean for you?

- Functions can be added or people hired to create them

- It requires effort to keep the project alive, but this applies for closed source as well

- If you want to participate you may change the software to your needs

- If something seems strange about an output you can check why it might be broken (or ask an IT person to do it)

Switch to the voting system now regarding Open Source

Are there any questions? Please use the hand raise in the TEAMS environment.
For statements you could use also the TEAMS chat. The chat will be recorded. **So no idea is lost.**

Do you think that an open source project could be an adequate organizational format?

Thank you for your attention

Dr. Tobias Opialla

German Federal Institute for Risk Assessment

Max-Dohrn-Straße 8–10 ● 10589 Berlin, GERMANY

Phone +49 30 - 184 12 – 26615

tobias.opialla@bfr.bund.de ● www.bfr.bund.de/en