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SBOM Management at Mercedes-Benz

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Bitkom Forum Open Source 2023
Erfurt, 27.09.2023

Mercedes-Benz



Agenda

With the **FOSS Disclosure Portal** we aim at a more efficient, digital, and transparent software supply chain regarding open source



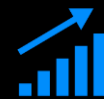
Mission

Free & Open Source Software (FOSS) brings innovation, efficiency and speed, but we need to make sure to play it safe



FOSS Disclosure Portal

Software Bill of Materials (SBOM) provided by suppliers to our central inventory enables checking license conformance easier & faster



SBOM Management at Scale

FOSS SBOM consumption will intensify the collaboration with software suppliers and poses both opportunities and challenges

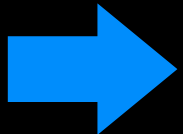
Mercedes-Benz FOSS Manifesto

- Set of guidelines which proclaim the **importance of FOSS** for a modern tech organization
- Consists of three parts: Preamble, Company Principles, Employee Principles
- Goal: **Facilitate the cultural change** in Mercedes-Benz IT & our subsidiaries towards Inner Source and Open Source
- Sends our engineers on their **FOSS Mission**

Recent Adaptations

Continental Automotive
FOSS Manifesto

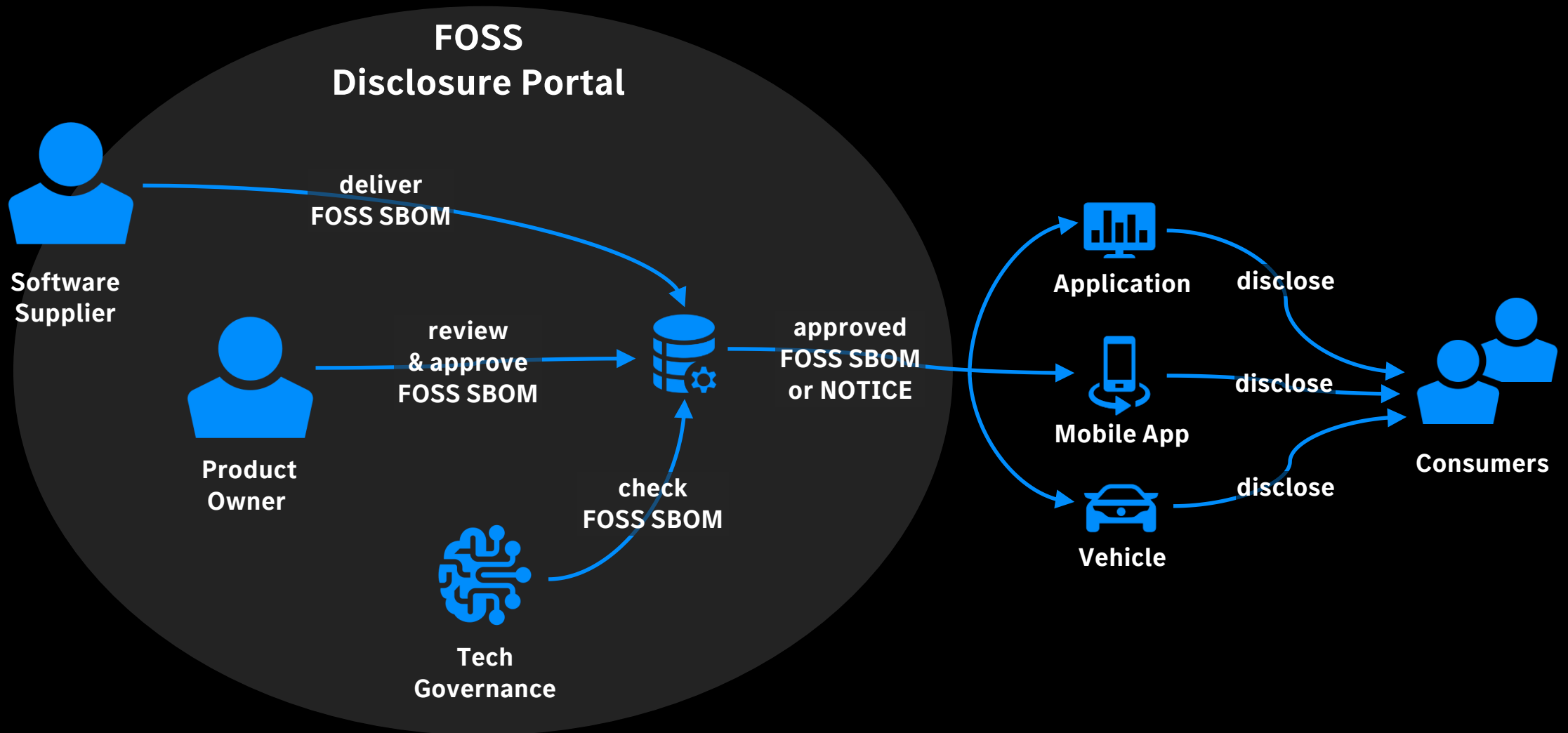
The Siemens Open Source Manifesto



<https://opensource.mercedes-benz.com/>



FOSS SBOM in the Software Supply Chain



Open Source Options

Use one of these ...



... or build your own



FOSS Disclosure Portal

OUR VISION: WHAT IS IT?

- A more efficient, transparent and digital software supply chain
- Digitized and automated FOSS Disclosure Process
- Increased transparency leads to better license compliance and security

OUR MISSION: HOW DO WE ACHIEVE IT?

- With the FOSS Disclosure Portal we automate the open source software supply chain
- Create a central worldwide inventory of FOSS Software Bill of Material (SBOM) from all Mercedes-Benz companies with legal information for license checks
- Provide automation for guided conformance checking and obligations management

OUR PURPOSE: WHY DO WE STRIVE FOR IT?

- Be compliant, secure, and developer-friendly
- Make life easier for developers, application owners, and software suppliers
- Follow the company's software compliance guidelines



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Benefits for Product Owners



ISO Format for
SBOM Exchange



REST API & CLI for
CI/CD Integration



License Database
for Legal Guidance



Policy Rules for
Compliance



Quality Checks for
Obligations Management



UI/UX Design
for Ease of Use



Notice Generation
for Disclosure

The screenshot displays a web application interface for SBOM management. The top navigation bar includes 'Dashboard', 'Projects', 'Showcase', and '1.0'. The main header shows 'Project Version "1.0" UNREVIEWED' with 'Edit' and 'More' buttons. Below the header, there are tabs for 'COMPONENTS', 'SBOM DELIVERIES', 'SBOM COMPARE', 'SOURCE CODE', 'QUALITY', 'THIRD PARTY NOTICES', 'DOCUMENTS', and 'AUDIT LOG'. The 'COMPONENTS' tab is active, showing a summary of 6 components (0 Denied, 0 Unassessed, 0 Questioned, 0 Warned, 6 Allowed). A table lists the components with columns for Name, Component Version, Type, License Effective, and Status. The table contains 6 rows of data.

Name	Component Version	Type	License Effective	Status
@foo/bar	1.2.3	Package	MIT	✓
@some/thing	4.14.388	Package	LGPL-2.1-only	✓
@another/component	2.0.4	Package	MIT	✓
help-me	0.0.9	Package	Apache-2.0	✓
somecoolparser	2.0.1	Package	Python-2.0	✓
welovecode	4.0.0	Package	ISC	✓

Demo

Dashboard > Projects > Showcase > 1.0

DAVID

Project Version "1.0" UNREVIEWED

Edit

More

COMPONENTS

SBOM DELIVERIES

SBOM COMPARE

SOURCE CODE

QUALITY

THIRD PARTY NOTICES

DOCUMENTS

AUDIT LOG

6 Components

0 Denied

0 Unasserted

0 Questioned

0 Warned

6 Allowed

Current SBOM: 24.06.2023 08:02 - SBOM Demonstration/v2 -

Search

Name	Component Version	Type	License Effective	Status
@foo/bar	1.2.3	Package	MIT	✓
@some/thing	4.14.186	Package	LGPL-2.1-only	✓
@another/component	2.0.4	Package	MIT	✓
help-me	0.0.9	Package	Apache-2.0	✓
somecoolparser	2.0.1	Package	Python-2.0	✓
welovecode	4.0.0	Package	ISC	✓

Rows per page: 100

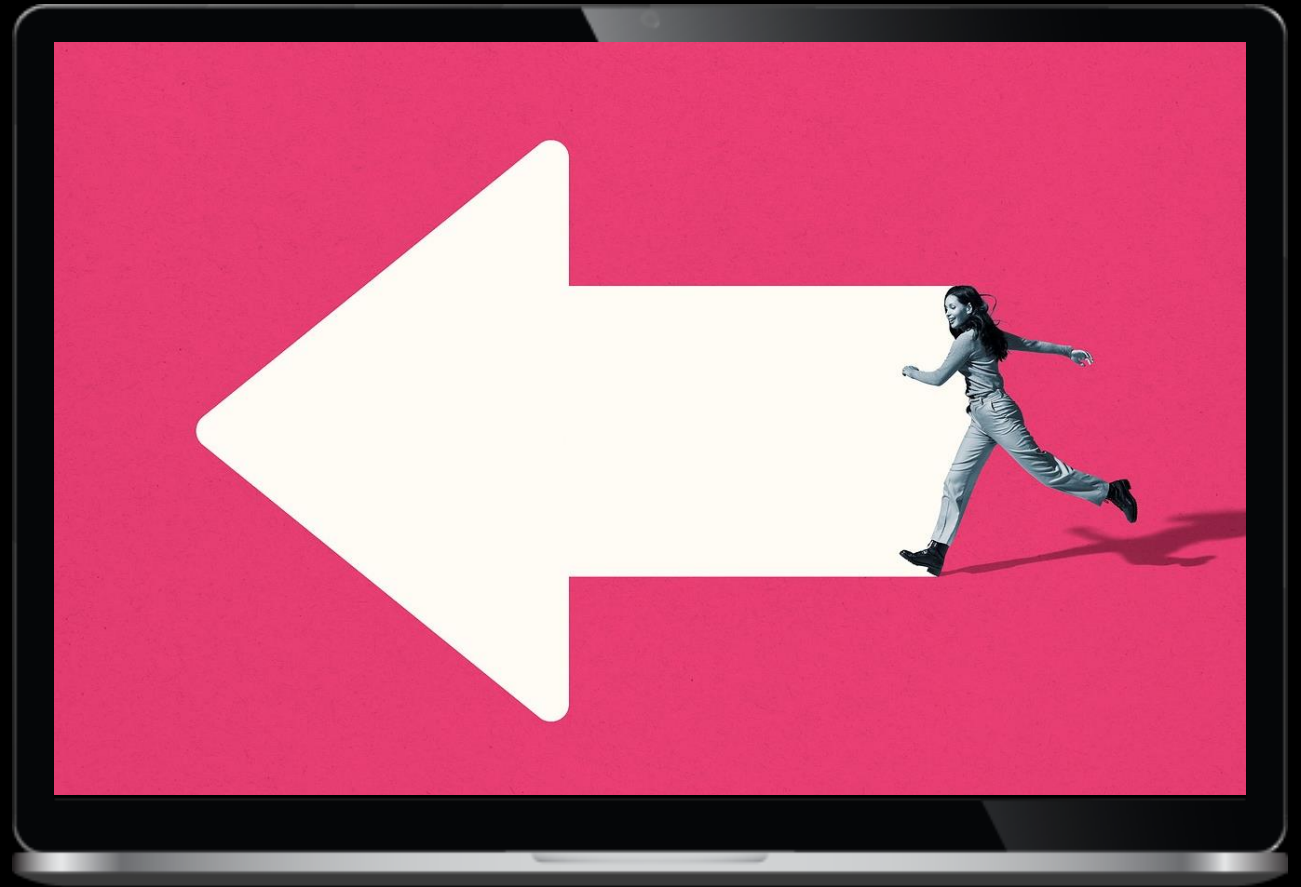
1-6 of 6

Provider/Privacy Statement

v0.9.9 from 22.06.2023 - INTERNAL DATA

SBOM Challenges

- Common Identifiers
- Data Quality and Curating
- Required Attributes
- Obligations and Abstraction
- All Code of All Dependencies



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What's in it for Suppliers



Digitization

Submit the SBOMs for your apps & control units to FOSS Disclosure Portal instead of filling in a MS Word template



CI/CD integration

Connect to FOSS Disclosure Portal API from your build pipelines



Transparency

Full transparency and policy support enables you to align with your customer much earlier in development process



Contributions Welcome

Disclosure Portal CLI is FOSS so that you can change it to your own needs and submit upstream for continued support
<https://github.com/mercedes-benz/disclosure-cli>