What is **OSADL?**
What does **OSADL?**

Carsten Emde, Rainer Thieringer

Open Source Automation Development Lab

(OSADL) eG

What is OSADL? What does OSADL?
Automotive Grade Linux, Face-to-Face meeting, April 12, 2018
Microchip Technology offices, Karlsruhe, Germany

OSADL
Open Source Automation Development Lab eG
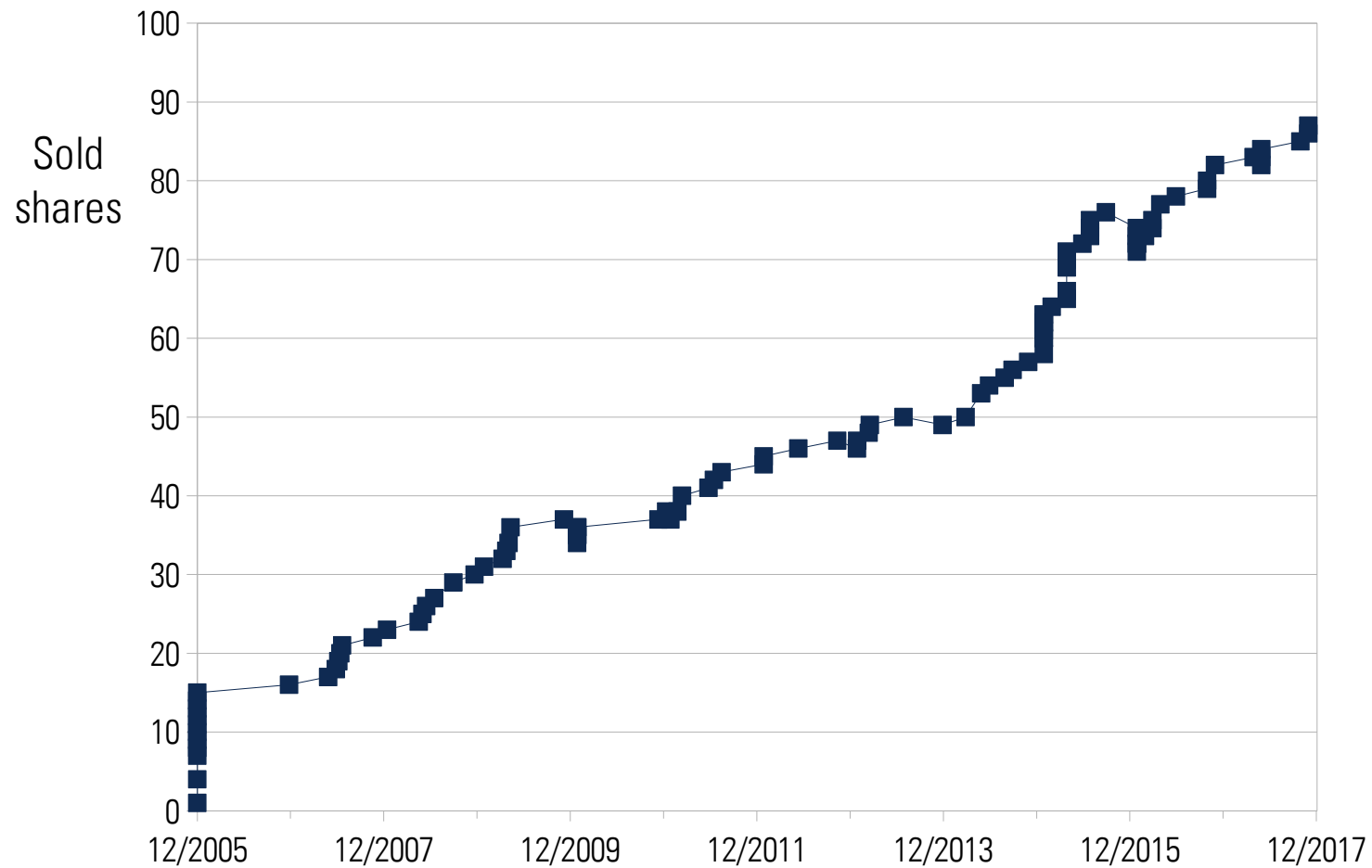
What is OSADL?

OSADL started as a "purchase community" of Open Source software. Today, OSADL delivers whatever is needed to use Open Source software in industrial products.

In other words: OSADL helps companies mitigate the risk of using complex systems that can no longer be handled by a single company alone.

Main topics:
- Real-time Linux, real-time network communication
- Quality assessment of Open Source software systems
- Safety certification of pre-existing software
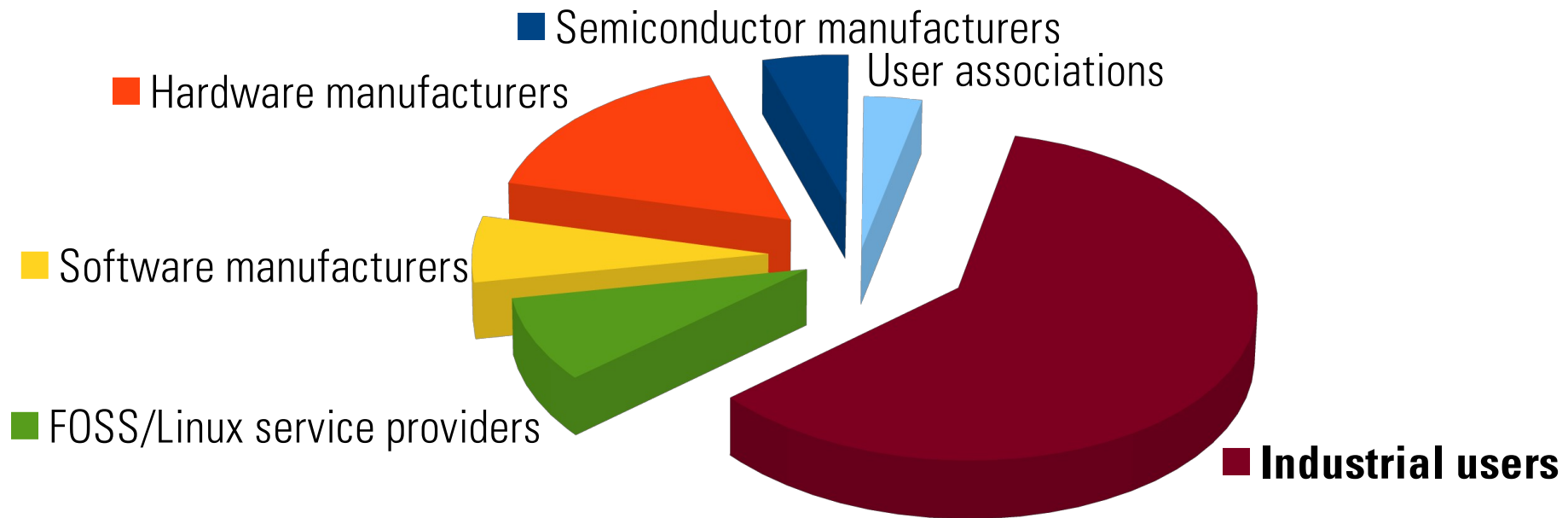- License compliance, product audit, process audit

What is OSADL? What does OSADL?
Automotive Grade Linux, Face-to-Face meeting, April 12, 2018
Microchip Technology offices, Karlsruhe, Germany

OSADL Growth

Sold shares

100
90
80
70
60
50
40
30
20
10
0

12/2005   12/2007   12/2009   12/2011   12/2013   12/2015   12/2017

What is OSADL? What does OSADL?
Automotive Grade Linux, Face-to-Face meeting, April 12, 2018
Microchip Technology offices, Karlsruhe, Germany

Industries of OSADL members

Semiconductor manufacturers

User associations

Hardware manufacturers

Software manufacturers

FOSS/Linux service providers

Industrial users

What is OSADL? What does OSADL?
Automotive Grade Linux, Face-to-Face meeting, April 12, 2018
Microchip Technology offices, Karlsruhe, Germany

open source meets Industry
osadl.org

OSADL
Open Source Automation Development Lab eG

What does OSADL? For example: Real-time Linux

- Origin: Initiatives of OSADL member companies from 2004 onward

- Project launch: Provided about 300,000 US-$ initial funding in 2015 as a prerequisite for a Linux Foundation project

- Handover: To the Linux Foundation Real-Time Linux Collaborative Project in 2015

- Dissemination: Journal articles, seminars, workshops, in-house training, consulting, academic teaching

- Networking: Annual Real-time Linux Workshop (RTLWS)

- Diagnostic tools: Kernel extensions to trace individual latency sources

- Showcase: More than 150 Linux real-time systems at the OSADL QA Farm

- Quality assessment: Industrial users trust OSADL's quality data

What is OSADL? What does OSADL?
Automotive Grade Linux, Face-to-Face meeting, April 12, 2018
Microchip Technology offices, Karlsruhe, Germany

What does OSADL? For example: Safety

- OSADL Safety-critical Linux working group founded in 2008

- SIL2LinuxMP project launched in 2015, Route 3_S, IEC 61508, SIL2, Multi-core processor

- Now in phase #3, members BMW, Bosch, Elektrobit, Hitachi, Intel, KUKA, Linutronix, STW

- Final certification phase #4 to be launched soon

- Consulting TUeV Süd, Certifying TUeV Rheinland

- Created more than 500 MByte of tools, data, documents and processes

- Successfully submitted more than 150 Linux kernel patches to improve code quality

What is OSADL? What does OSADL?
Automotive Grade Linux, Face-to-Face meeting, April 12, 2018
Microchip Technology offices, Karlsruhe, Germany

What does OSADL? For example: License compliance

- License Compliance Audit (LCA)

- Supplier License Compliance Audit (SLCA), was basis of the LF OpenChain initiative

- Large collection of legal FAQ, answers provided by copyright expert lawyer Till Jaeger

- Several legal assessment on particular topics such as kernel modules and redistribution of a Linux distribution

- Open Source License Obligations Checklists (OSLOC) project

- OSADL Scanbook with Linux kernel delta detection tool and related database

- Regular seminars, workshops and training courses on legal aspects of Open Source software

What is OSADL? What does OSADL?
Automotive Grade Linux, Face-to-Face meeting, April 12, 2018
Microchip Technology offices, Karlsruhe, Germany

OSADL
Open Source Automation Development Lab eG

AGL + OSADL = Benefits for all of us

Real-time Linux

- Foster the activities to merge the still off-tree real-time patches into mainline Linux

- Increase the community to provide long-term maintenance of real-time Linux

- Participation in the Linux Foundation Real-Time Linux Collaborative Project

Safety-critical Linux

- Combine the expertise of more participants and consider more safety domains to further improve processes and strategies of the SIL2LinuxMP project

What is OSADL? What does OSADL?
Automotive Grade Linux, Face-to-Face meeting, April 12, 2018
Microchip Technology offices, Karlsruhe, Germany