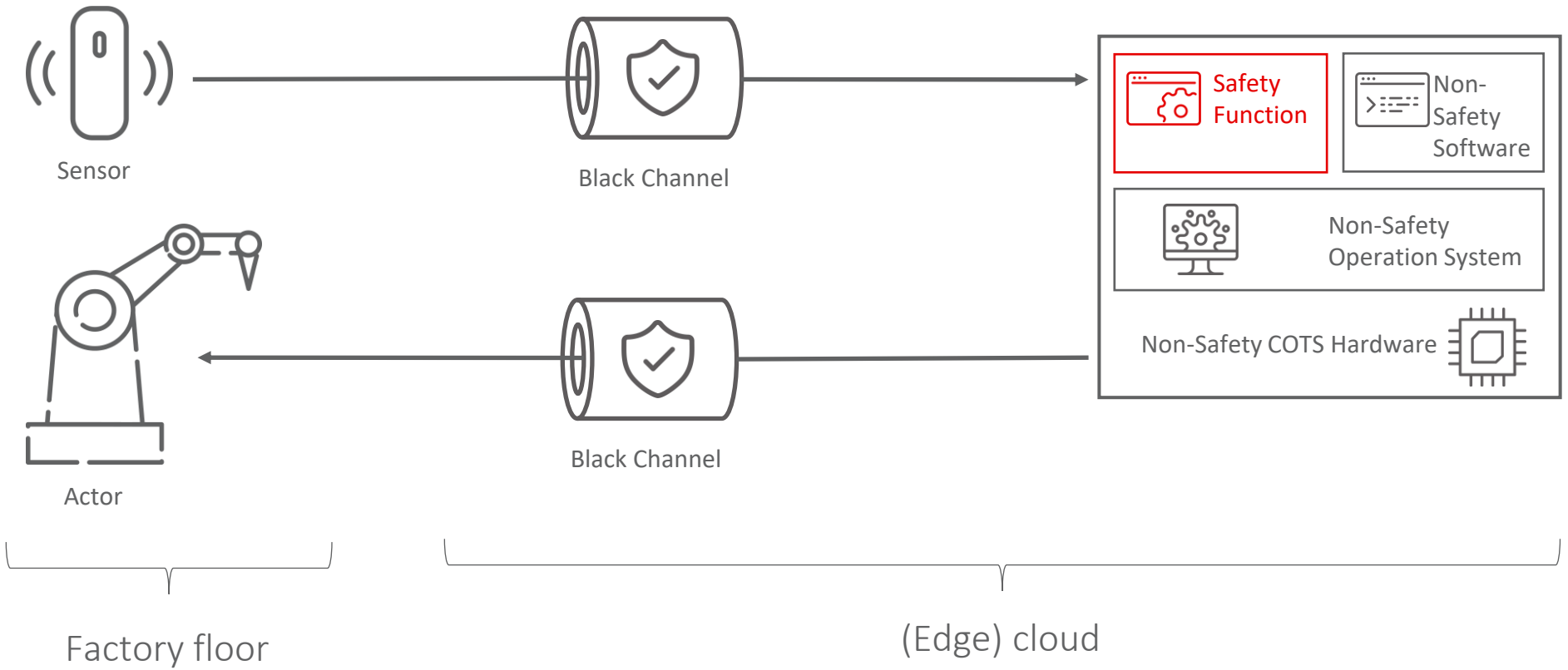
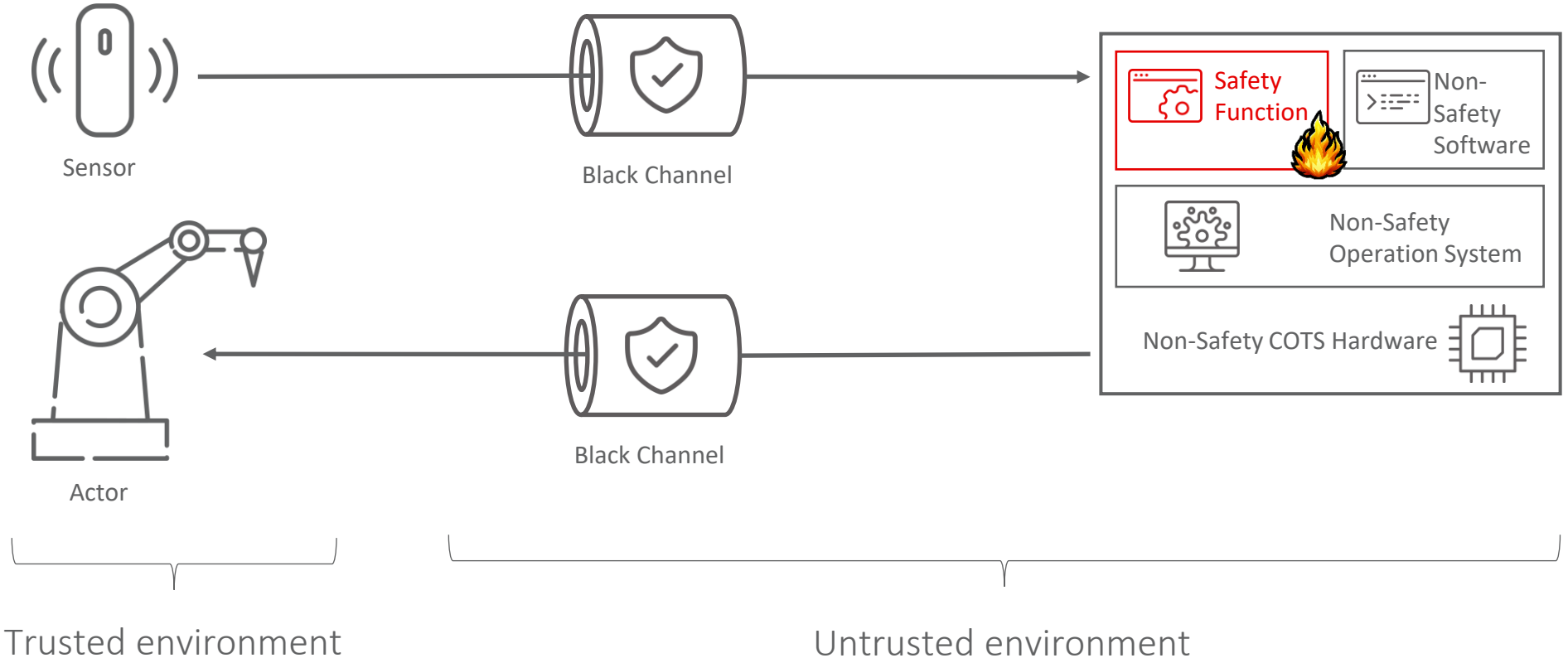
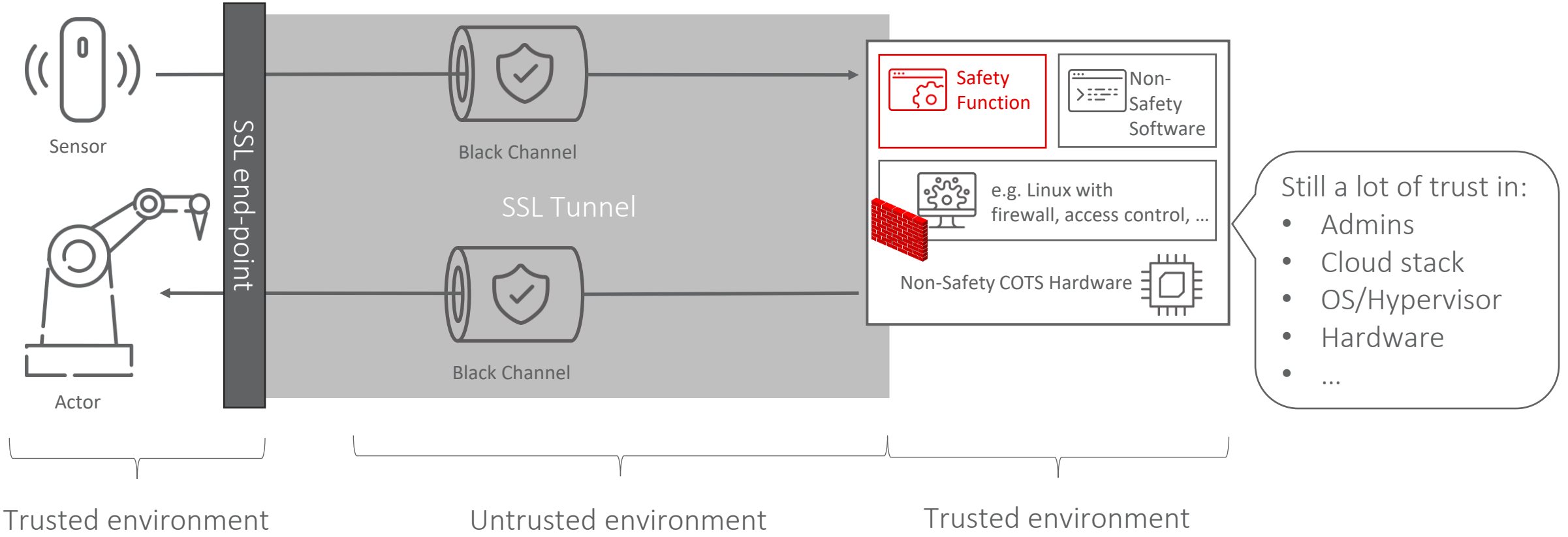
Motivation: Safety Without Security



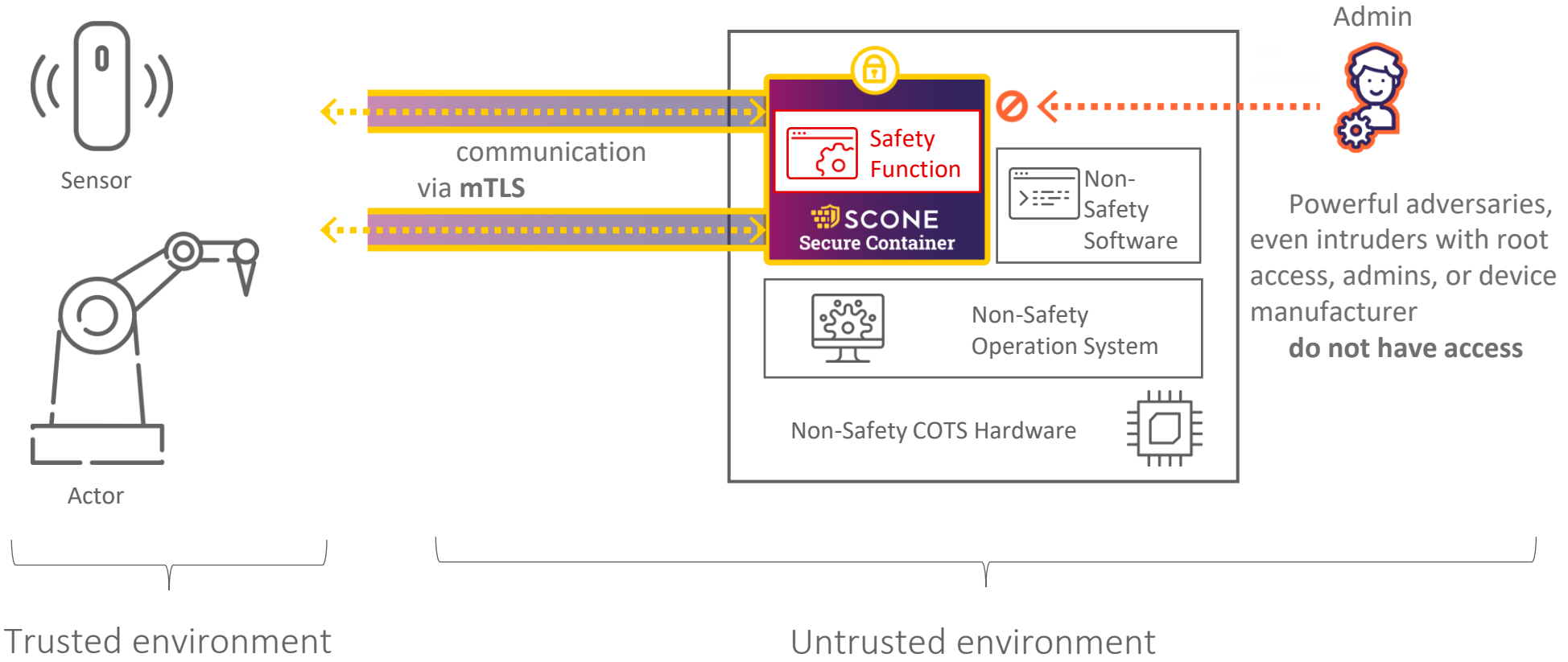
Motivation: No Safety without Security



Safety & Security



State-of-the-art Safety & Security



SCONE

Security due to confidential computing

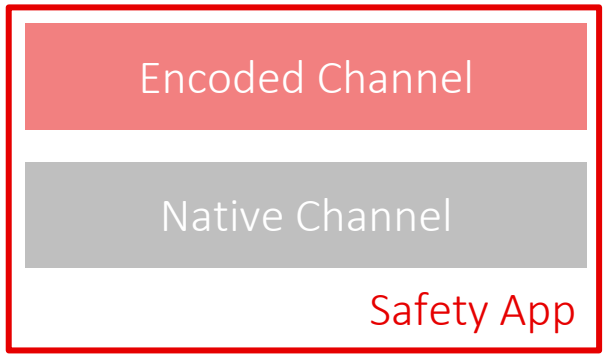
SIListra Safety Transformer

Safety due to coded processing

Scone: https://scontain.com

SIListra Safety Transformer: Safety due to Coded Processing

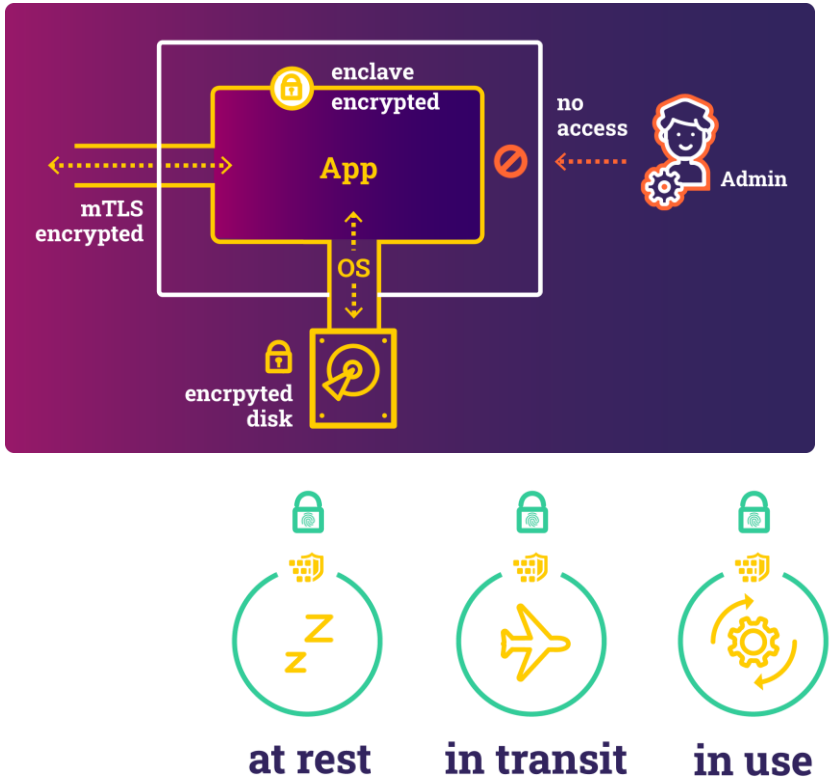
Two diverse SW channels:



- Fully automated application of SCP with the **SIListra Safety Transformer**
- 18 years of experience that includes anything from
  theoretical research to industrial applications
- TÜV Süd Rail GmbH has assessed the SIListra Safety Transformer 2.0.0 in 2023
  - ISO 26262:2018 (up to ASIL-D)
  - IEC 61508:2010 (up to SIL3)
  - ISO 13849-1:2023 (up to PLe)
  - IEC 62061:2021 (maximum SIL3)

SCONE

Security due to Confidential Computing



- SCONE supports the development and operations of modern **confidential cloud-native applications** and **multi-party confidential computing.**
- The objective of the SCONE platform is to protect of applications, data, code and secrets **at rest, during transmission** and **during computation.**
- Native applications can be transformed into confidential applications **without source code changes** and run in TEE hardware enclaves (e.g. **Intel SGX**)

- Private independent German SME
  - Founded 2017
- About 20 employees in Germany & Brazil
  - Rust, Go, C, and Java
  - certified Kubernetes administrators
  - Focus on confidential
- https://scontain.com

- Spin-off of TUD Dresden University of Technology
  - Founded 2012
- About 10 Software Developers in Dresden
  - C/C++, Embedded
  - all certified Functional Safety Engineers, Professionals or Experts
- https://silistra-systems.com

Goal: State-of-the-art Safety & Security

State-of-the-art Safety with Coded Processing

- Run safety logic on any hardware
- Together with non-safety software
- Enables more flexible architectures
- Shortens development times
- Scale with the available hardware
- Enables portability to other hardware

State-of-the-art Security with Confidential Computing

- Run on untrusted (edge)-cloud
- No trust required in
  - Admins
  - Cloud stack
  - OS/Hypervisor
  - Hardware