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TOC

- Status report on QA measures
  - Influences and constraints of QA Practices
  - Community working group, discussion forum and quality hub

- Tools developed for improving code quality
  - ROS node / package generator
  - Rosinstall Time Machine
  - Tools outlook: History-based Linting and Fuzz Testing
Qualitative Research in the ROS Community

- In-depth **interviews** with 10 community members (ROS/ROS-I)
- **Virtual ethnography** (wikis, forums, answers, etc.)
- **Community Events** (ROSCon, 2 ROS-I meetings, Danish ROS meetup)
- The analysis phase is **completed**.
- We are in the **implementation phase**.


Influences and constraints of QA Practices in ROS

What do we see?

- Participation Motives (ideology, enjoyment)
- Priorities of the community (new features)
- Meritocratic culture (reputation through technical expertise)
- Lacks of sustainability strategy
- Complexity (interdisciplinary)
- Adaptability (informalism, ease of use)

What does it mean for a company developing systems on top of ROS?

- Difficult to mandate QA tasks (tests, code review) which is seen as “boring”
- QA work must be made enjoyable via secondary incentives (recognition, gamifications)
- Sustainability of ROS (packages) requires your willingness to invest into maintenance
- Importance to engage with the community
Community engagement:
ROS QA Working Group

- 23 members
- From 7 countries
- From 3 continents, under European leadership
- From 20 organizations: 16 companies, 2 universities, 2 research institutions
- 5 meetings have taken place
- Discussion of possible QA initiatives in the community processes
- Ranking of initiatives
What are the community priorities?

Packaged into 4 iterations
ROSIN Initiatives Implementation Timeline

Phase I Pre-implementation

- December 2018
- January 2019
- June 2019
- December 2019
- March 2020

Phase II Implementation

- Iteration I
  - Jan. 10
  - Jun. 18
  - Iteration I Completed

- Iteration II
  - Jun. 18
  - Dec. 18
  - Iteration II Completed

- Iteration III
  - Jan. 19
  - Jun. 19
  - Iteration III Completed

- Iteration IV
  - Jun. 19
  - Dec. 19
  - Iteration IV Completed

Continuous Improvement

- QA Working Group set up
- Preliminary Study
- Initiatives Design

Jonathan Hechtbauer
Community engagement - Quality Discourse

- New category dedicated to quality
- Channel discussion
- Extension of the Quality Working Group
Community engagement - Quality Hub

- Focal point to foster quality
- Tutorials for quality oriented practices
- We need your help to create solid resources
First success – Improved quality badge

- Before:
  - Green badge if at least one test exists

- Available in ROS melodic:
  - Build-statistic generated in buildfarm
  - Color of badge rewards successful tests
  - Displays number of tests & build history
  - Wiki user can directly access test results