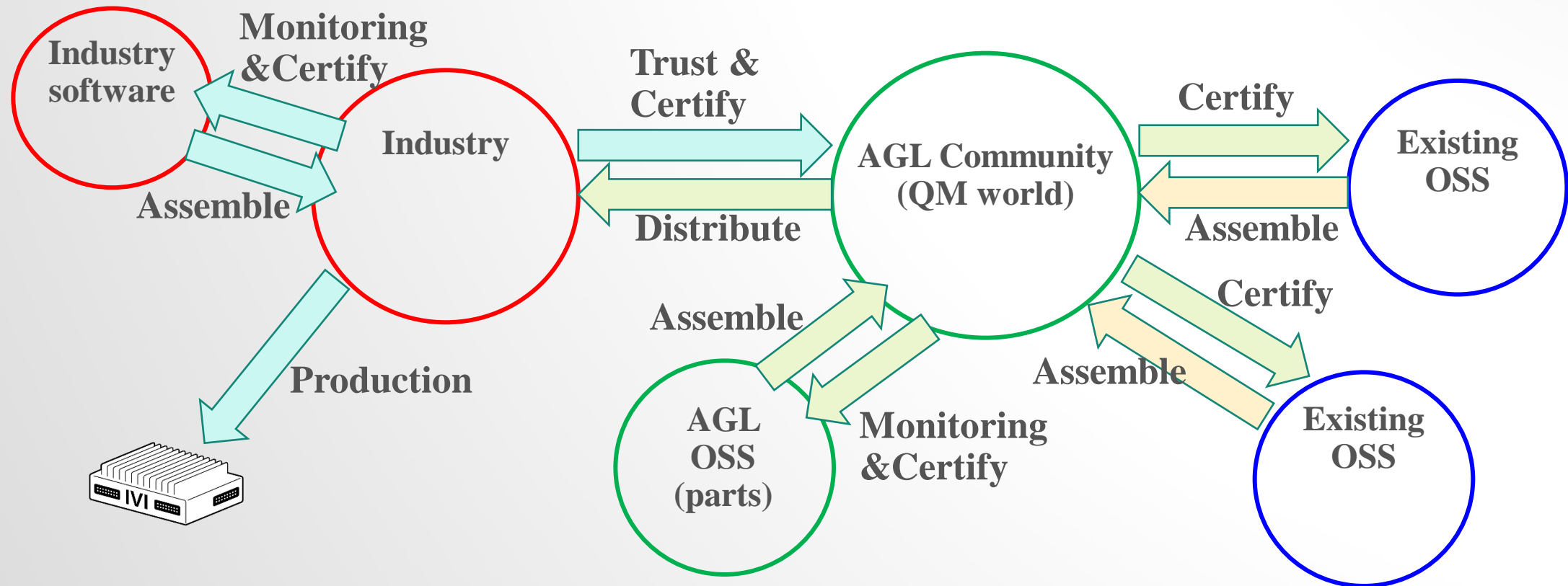# AGL Quality Management Proposal part.1

AGL IC-EG development process sub team

What we aim

- We want to create workflow from open source development to product development.
  - It wants to be able to certify that it has quality control.
 - It wants to be able to embrace by open source community and industry.

How to use OSS in V-model?

- V-model is required by automotive standard (ASPICE, ISO26262).
  - Automotive software development is a same.
    - SWE.1 Software Requirements Analysis
    - SWE.2 Software Architectural Design
    - SWE.3 Software Detailed Design and Unit Construction
    - SWE.4 Software Unit Verification
    - SWE.5 Software Integration and Integration Test
    - SWE.6 Software Qualification Test
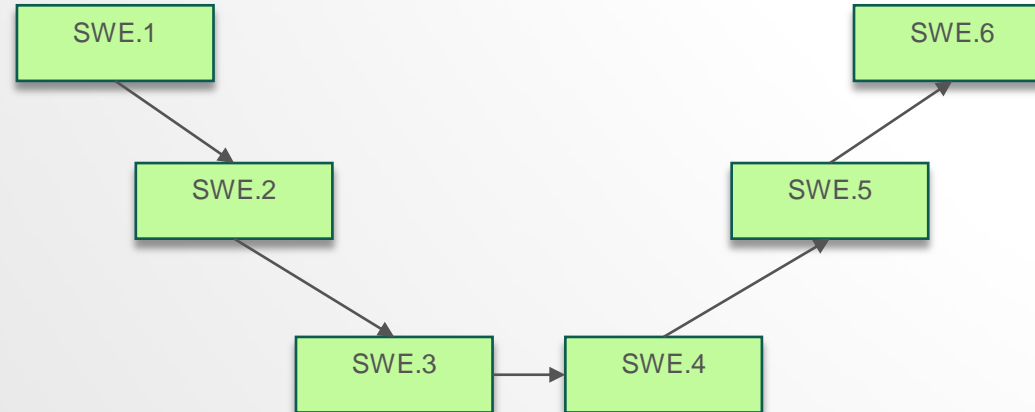
SWE.1 Software Requirements Analysis

- When we use AGL platform in product, software requirements can divide to two parts. One part is AGL distribution part, another part is proprietary part.

- Industrial point of view
  - We have to analyze system requirement. And we have to know what requirement achieve by AGL platform.
  - We have to define the verification criteria to test at SWE.6 phase.
  - The work products of SWE.1 must be performed by us (industry).

Development part of the AGL community
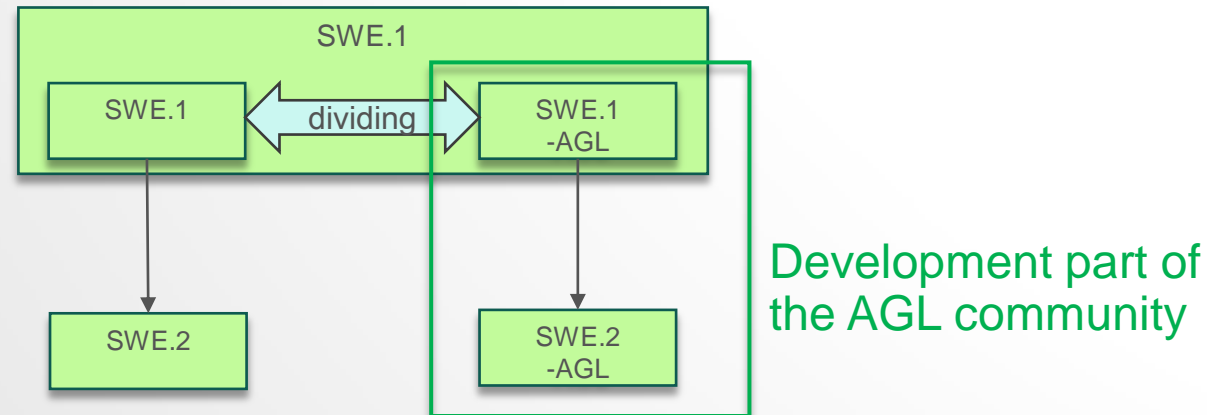
SWE.1 Software Requirements Analysis

- How to trust AGL community?
  - ACQ.4 is define the supplier monitoring process.

- Community point of view
  - We are not a supplier !!

- My opinion
  - ACQ.4 requires to collaborative work and common agreement with customers and suppliers.
  - If the industry members collaborate in AGL community, we can obtain ACQ.4 requirement.
    - It's current AGL IC-EG situation.

ACQ.4.	BP1	Agree on and maintain joint processes
	BP2	Exchange all agreed information.
	BP3	Review technical development with the supplier.
	BP4	Review progress of the supplier.
	BP5	Act to correct deviations.

AUTOMOTIVE
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SWE.1 Software Requirements Analysis

- What work products are required of the community?
  - ASPICE requests these work products.
  - But AGL platform is provided "AS IS" by the community.

- My opinion
  - AGL community should provide manifest, change request (from own), review record, analysis report.
  - Other work products don't require in "AS IS" case.

ACQ.4.	**02-01**	**Commitment/agreement**
	13-01	Acceptance record
	13-04	Communication record
	13-09	Meeting support record
	13-14	Progress status record
	13-16	**Change request**
	13-19	**Review record**
	14-02	Corrective action register
	15-01	**Analysis report**

SWE.1 Software Requirements Analysis

- What should we do?
  - Create reference spec to show our vision.
    - It has to be able to break down to software architecture.
    - It doesn't have to be perfect, but it needs to cover the required area to determine the direction.
  - Create a manifest to show our rule.
    - Contribution rule.
    - Design rule.
    - Documentation rule.
    - Coding rule.
    - Review rule.
  - Describe "why and what it's changed".
  - All records are open to track and assess the AGL community.

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Survey: Contribution rule

- ….

Survey: Design rule

- ….

Survey: Documentation rule

- ….

Survey: Coding rule

- Linux kernel coding style
  - https://www.kernel.org/doc/html/v5.4/process/coding-style.html

- GNU Coding Standards
  - https://www.gnu.org/prep/standards/standards.html

- Systemd
  - https://github.com/systemd/systemd/blob/master/docs/CODING_STYLE.md

- AGL
  - ?