



# FOSS For Automotive Developed In The Open Becomes Real GDP

ELCE  
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Konsulko Group / Codethink Ltd / GENIVI community

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# Speakers: [chbae](#), [leon-anavi](#) & [toscalix](#)

- [Changhyeok Bae](#) (chbae)
  - GDP Maintainer (community). Research Engineer at LG Electronics.
  - Experienced OpenEmbedded/Yocto developer.
- [Leon Anavi](#) (leon-anavi)
  - GDP contributor. Software Engineer at [Konsulko Group](#).
  - Automotive IVI solution expert.
- [Agustín Benito Bethencourt](#) (toscalix)
  - GDP team lead. Principal Consultant - FOSS at [Codethink Ltd](#).
  - Experienced in managing people & programs/projects in the open.



# Who is the GENIVI Alliance

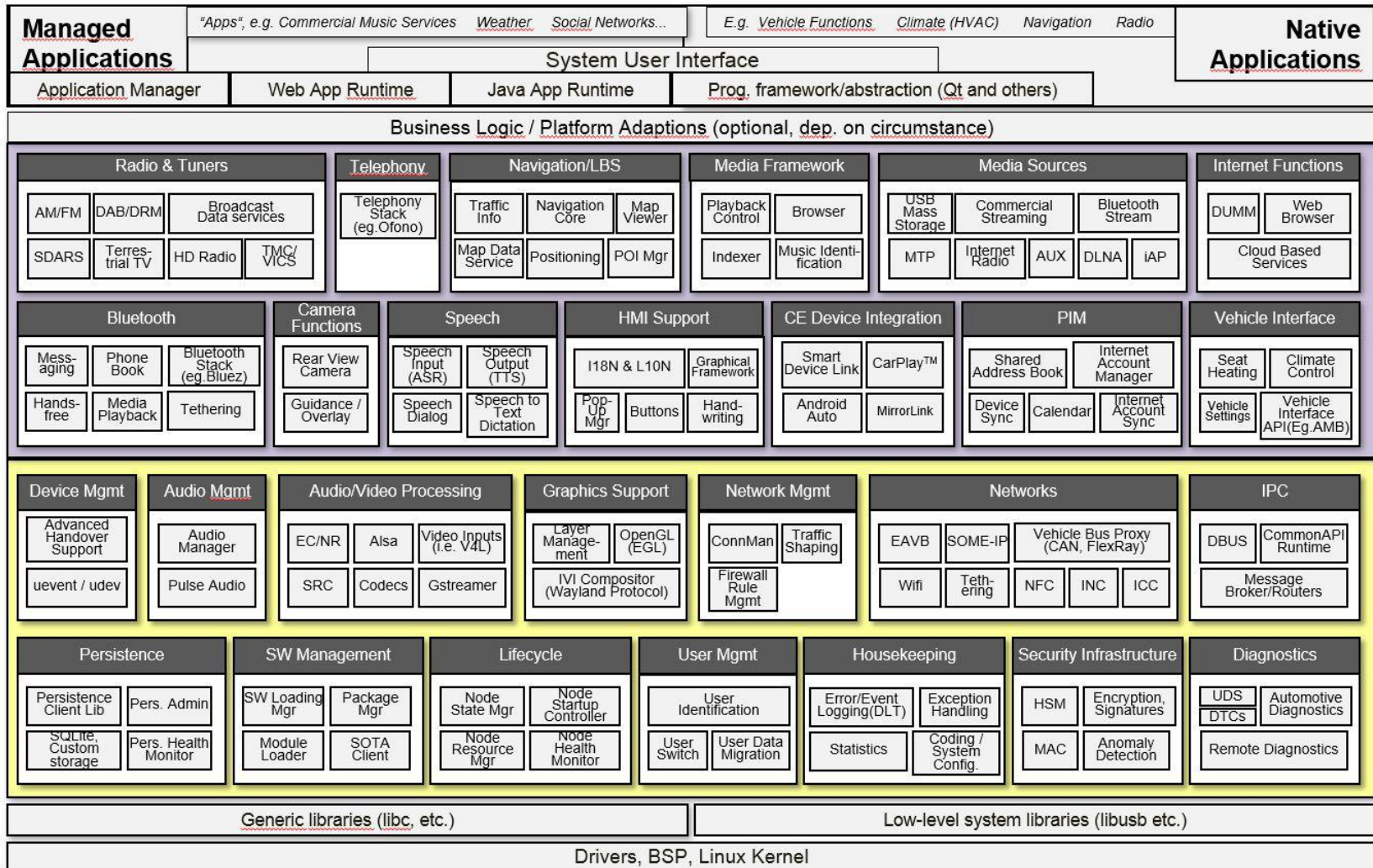
The GENIVI Community is currently represented by 140 member companies...

... committed to driving the broad adoption of specified, Open Source, In-Vehicle Infotainment software.



# What does GENIVI Alliance do?

- Development of FOSS components for automotive.
- Delivery of Linux Based systems for automotive.
- Automotive Industry Specifications and GENIVI Compliance Program.
- Organization and participation in industry events.
- Open Source awareness within the automotive industry.



- **Baselines:** outcome of the compliance program.
  - Yocto baseline (meta-ivi).
  - Baserock baseline.
- **Master:** rolling release: focused on auto system devs
- **GDP:** GENIVI Development Platform for apps devs.
- **New initiatives.**
  - GDP spins: community driven systems based on Master
  - GDP SDK: development tools

# Why Master?

- Where collaboration takes place.
- Latest automotive software available.
  - In OSS for automotive, GENIVI is upstream.
- Targets FOSS auto system devs. & GDP contributors.
- Build GDP from scratch for your favourite target or customise your build.

# What is Master?

- [Rolling release](#) with the latest integrated software for automotive.
- Central integration point.
- Yocto (poky) based.
- Two main repos:
  - [genivi-dev-platform](#)
  - [meta -genivi-dev](#)



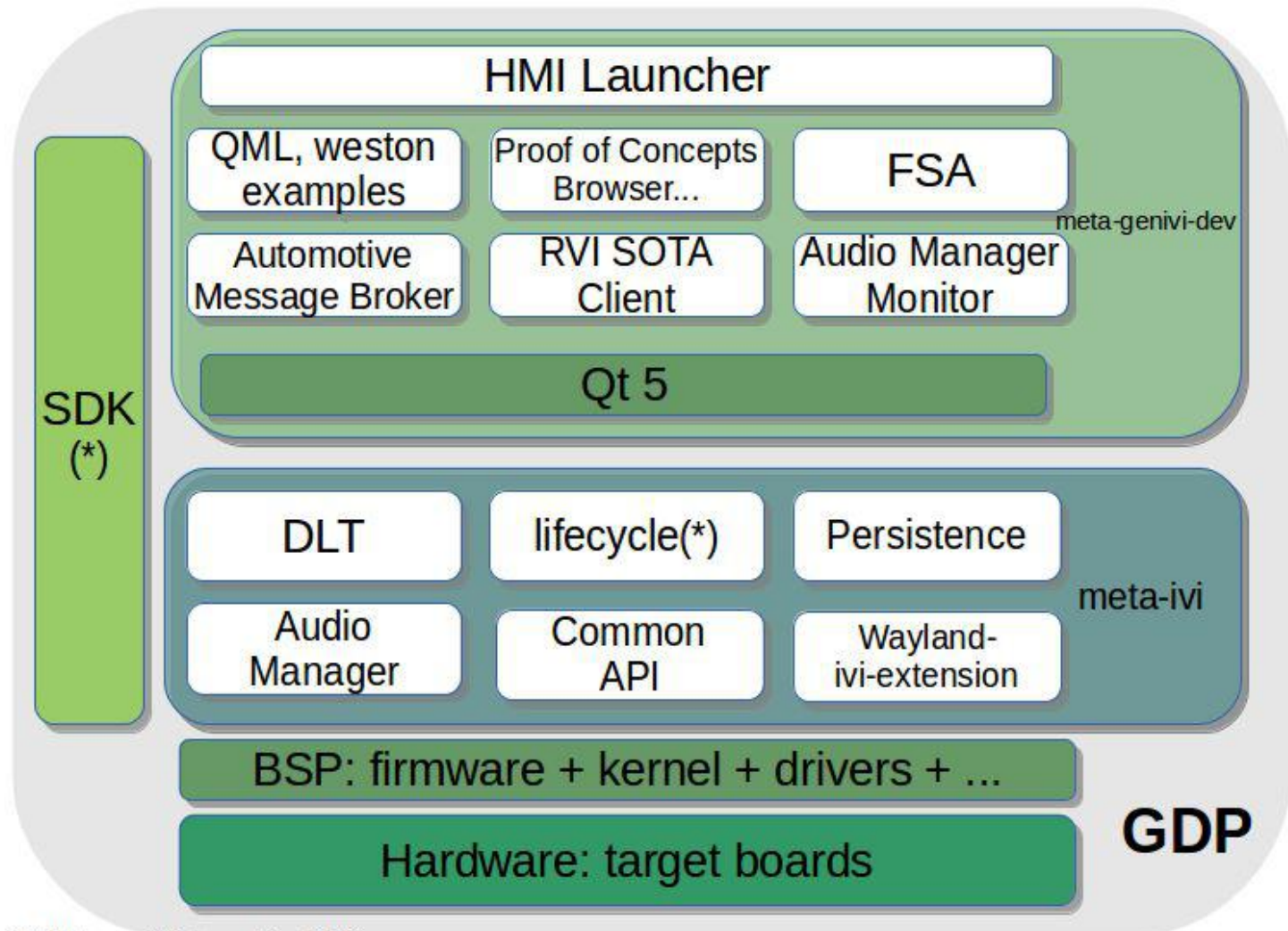
# Why GDP?

- It brings GENIVI components for automotive to the masses, including [meta-ivi](#).
- Ideal for app developers and automotive newbies.
- Up to date stable software.
- Easier to consume and improved stability.

# What is GDP?

- Acronym of [GENIVI Development Platform](#)
- FOSS and open delivery project.
- Published as binaries.
- GDP is based on Master (snapshot + stabilization).
- Available for several development boards & QEMU.
- Current stable version ([GDP-ivi9](#))
  - Latest release: [GDP 11 RC2](#).

GDP [block diagram](#)...



(\*) Not available yet in GDP

## Delivery

- GDP maintainers
  - **Changhyeok Bae**, community.
  - **Robert Marshall**, Codethink Ltd.
  - **Tom Pollard**, Codethink Ltd.
  - Community testers.
- Other key people:
  - Meta-ivi & Renesas BSP maintainers, community management, devops/IT service, PMO, delivery team lead, GENIVI architect, LRT team ...

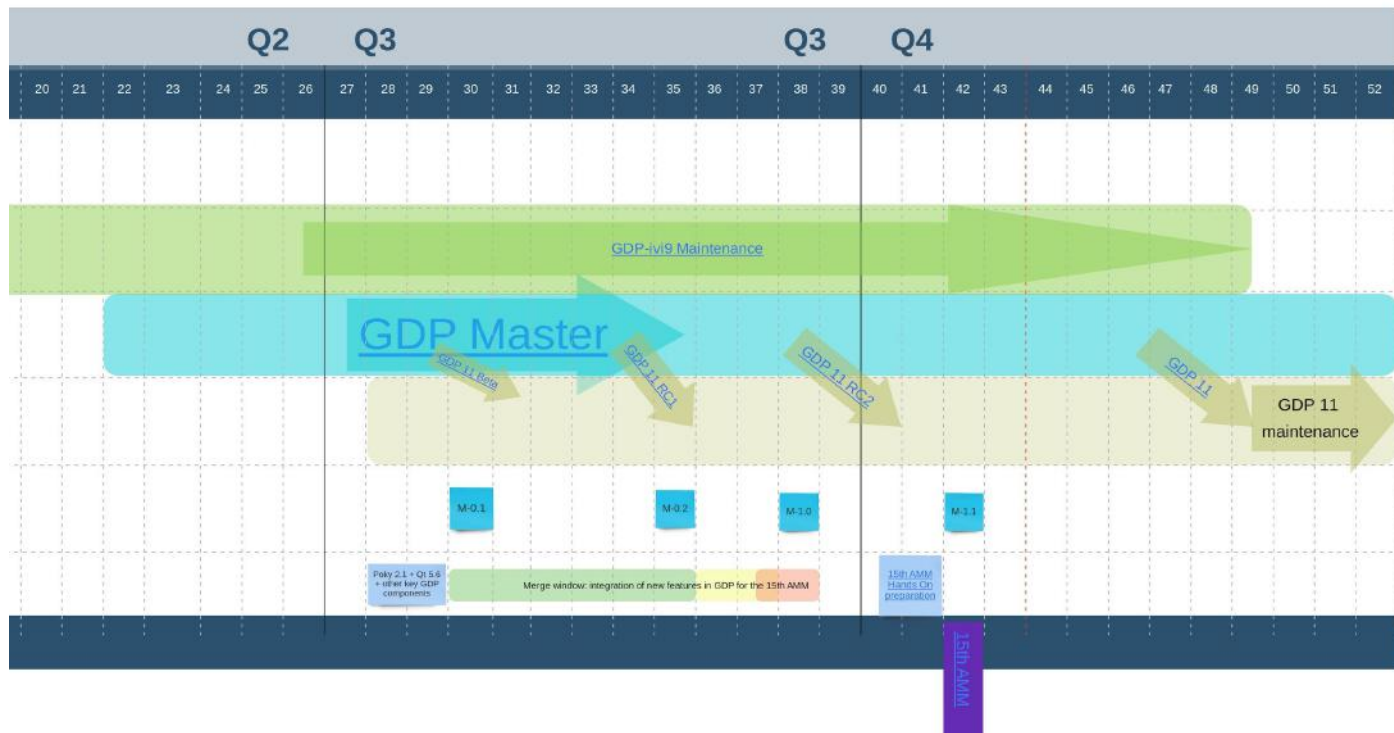
## Development

- GENIVI Expert Groups
- Community contributors

## Tools GDP project uses today:

- [GitHub](#): git repositories and code review.
- [JIRA](#): bug tracker and task management tool.
- [Confluence](#): wiki and blog.
- [go.cd](#): integration/delivery mgnt.
- [Mailman](#):  
genivi-projects@lists.genivi.org
- IRC: #automotive at irc.freenode.net

## GDP 11 Timeline



# GDP 11 RC2, the latest release

- [Released](#) on October 4<sup>th</sup> 2016. [Download](#) it!
- Demoed for the first time at ELCE.
- [GDP 11 RC2 highlights](#):
  - Software: Yocto 2.1, Qt 5.6, AM 7.0, wayland-ivi-extension 1.10.9 (1.11 pre-release), meta-ivi 11...
  - Ports: QEMU, RPi2 & RPi3, Intel Minnowboard MAX/Turbot and Dragonboard 410c. Also build GDP for Renesas Porter & Silk from scratch.





# Example of a contribution to GDP: GENIVI SOTA Project

- A complete suite for uploading, managing, queueing, transmitting, validating, and deploying software updates remotely to a fleet of vehicles
- Server + Client
- Open source repositories in GENIVI GitHub



# Example of a contribution to GDP: SOTA Client

- SOTA client implementation written in the Rust programming language
- Remote Vehicle Interaction (RVI) and/or HTTPS communication based on JSON-RPC
- Integration of RVI SOTA Client in Automotive Grade Linux (AGL) and GENIVI Development Platform (GDP) through Yocto/OE recipes and layer meta-rust

# Example of a contribution to GDP: SOTA Client in GDP

- Layer meta-rust provides recipes for building Rust and Cargo: [Yocto/OE layer for Rust](#)
- Recipe `rvi-sota-client_git.bb` in layer `meta-genivi-dev` which builds and deploys RVI SOTA client and its `systemd` service
- RVI SOTA Client
  - [https://github.com/advancedtelematic/rvi\\_sota\\_client.git](https://github.com/advancedtelematic/rvi_sota_client.git)
  - [https://github.com/GENIVI/rvi\\_sota\\_client.git](https://github.com/GENIVI/rvi_sota_client.git)

- GDP 11 to be released before end of 2016
  - New [App. Launcher](#) (developed by [ICS](#)) with new demo apps.
  - [15th GENIVI AMM](#), SFO, CA, US. Oct 18th 2016
    - App launcher preview + GDP Hands on Session
- New deliverables:
  - SDK proof of concept + [GDP spin](#) for Qt Developers.
- First steps:
  - Towards automated acceptance testing.
  - Measure release impact.

But above all...

More focus on automotive developers.

Check the latest GDP [news](#).

# Interesting links

- [www.genivi.org](http://www.genivi.org)
  - GENIVI [FAQ](#)
  - GDP latest [GDP news](#)
- [GDP Master](#)
  - [genivi-dev-platform](#)
  - [meta-genivi-dev](#)
- Download:
  - [GDP-11 RC2](#)
  - [GDP-ivi9](#)
- [Get involved:](#)
  - Get [the sources](#)
  - Contribution [policies](#)
  - Report [bugs](#)
- Follow up
  - Delivery status [reports](#)
  - [GDP overview](#) (weekly)
  - GDP [Out There](#)

# Questions?

Call for testing

[GDP 11 RC2](#)