Reference Hardware, System Architecture EG.

AMM 2018 Tokyo

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SEIJI GOTO

Mazda Motor Corporation

Multiple OEMs and Types of Cars

AGL OEMs

DAIMLER,
HONDA, MAZDA
MITSUBISHI MOTORS
NISSAN, SUBARU
SUZUKI, TOYOTA

Types of Cars

Compact · Sports · Luxury
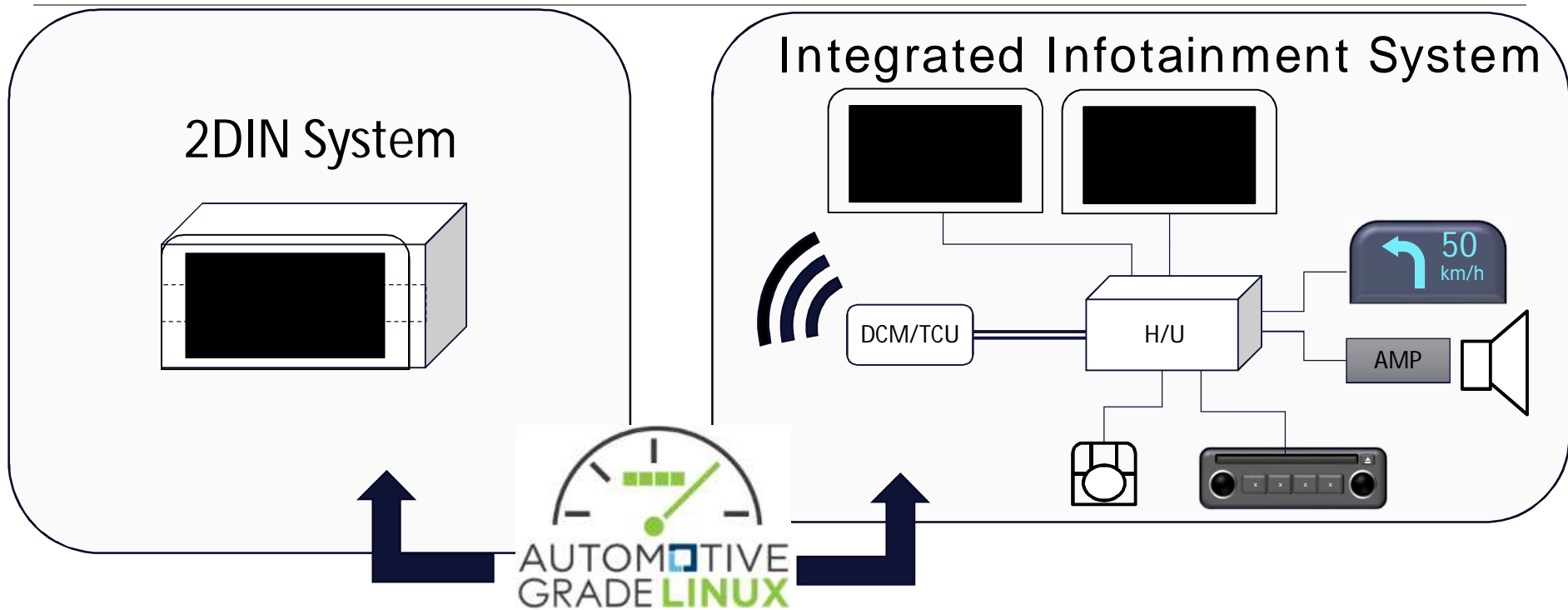Sedans · SUVs · Crossovers
Electric Cars, Hybrid Cars

## The Diversification of IVI system configuration is inevitable.

Compatible with various IVI system

2DIN System

Integrated Infotainment System
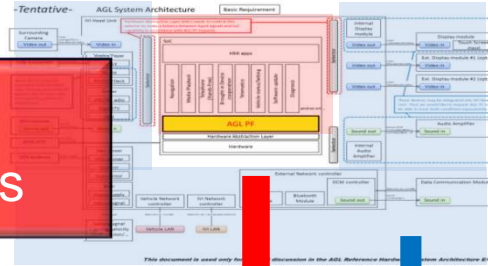
DCM/TCU

H/U

AMP

50 km/h

If AGL can work on both systems, (just like laptop and desktop)
it will solve the problem of the current IVI development workload.

Example of System Architecture
compatible with various combinations of peripherals.

Common requirements

Various hardware requirements

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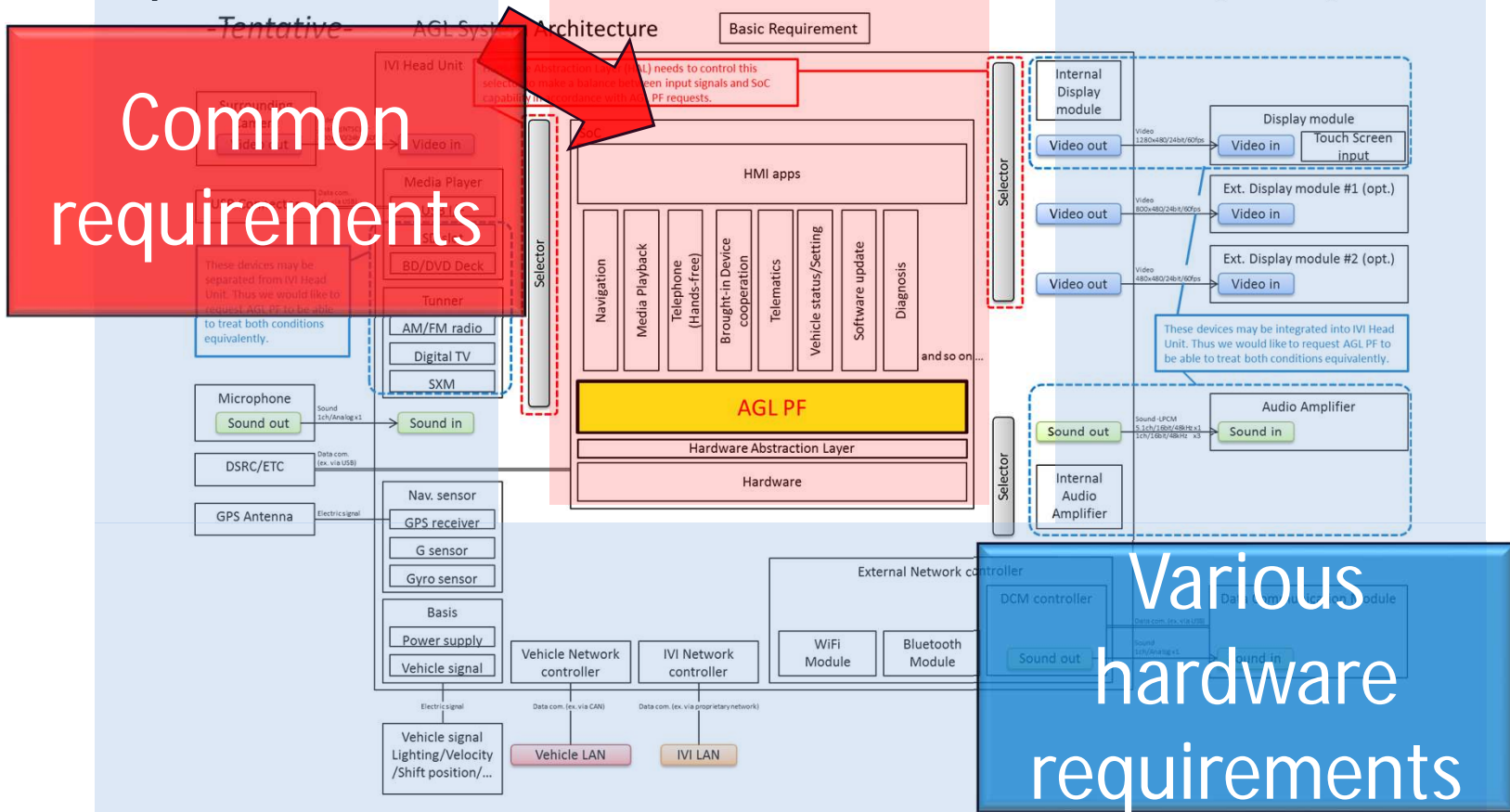
Define Reference Hardware Architecture

Common Requirements

Various hardware requirements

Tentative

Reference Hardware (for AGL PF)
- Community Board
- Display
- Ethernet
- USB
- Deck
- Tuner
- BT/Wi-Fi ...

Reference Hardware (for luxury spec)
- Main Board
- GPS
- BT/Wi-Fi
- Camera
- Deck
- Tuner
- Ext Board
  - AV control processor
- Display
- RSE
- CAN controller
- CAN

Reference Hardware (for compact spec)
- Main Board
- Deck
- Tuner
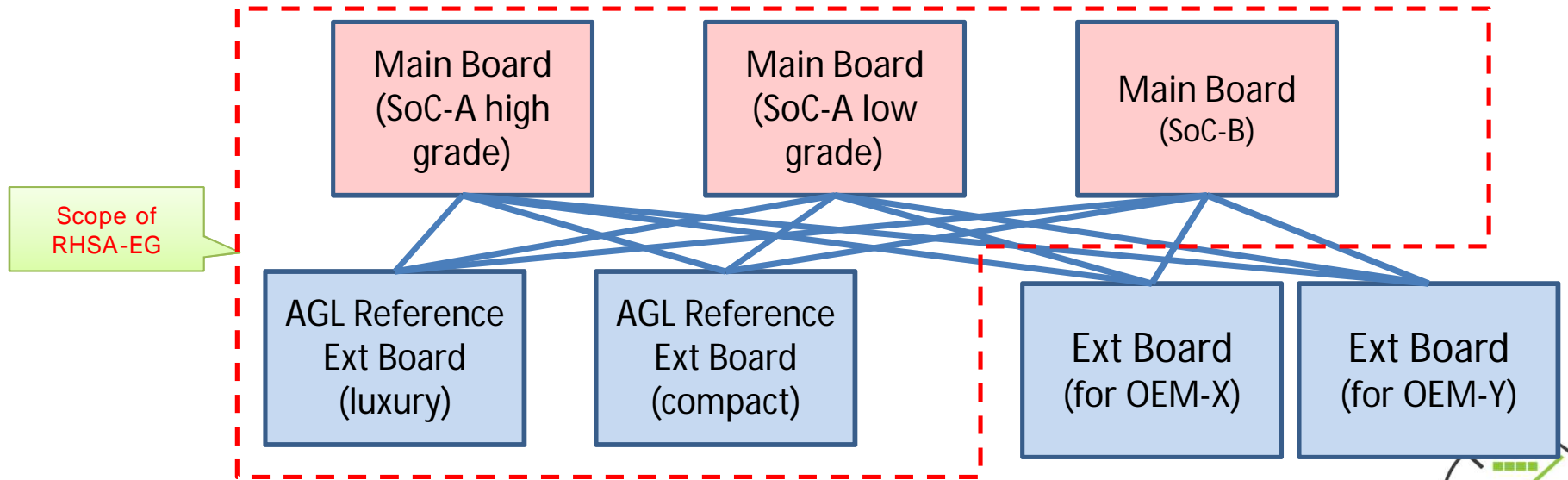- Display
- BT/Wi-Fi
- Ext Board
  - CAN controller
- CAN
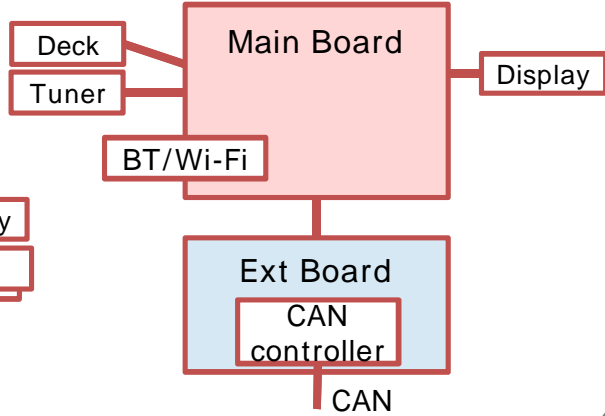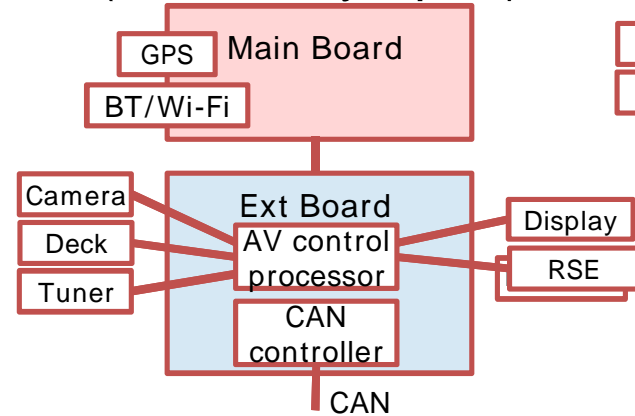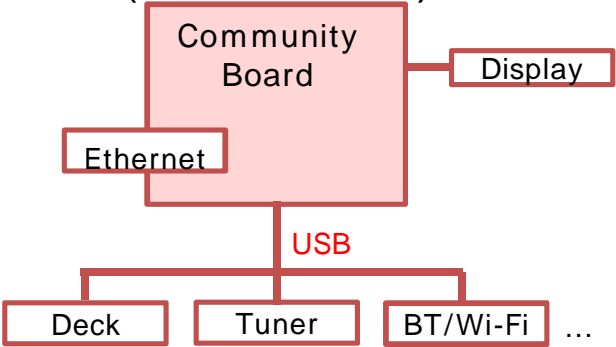
(a) Reference Hardware Specification Document

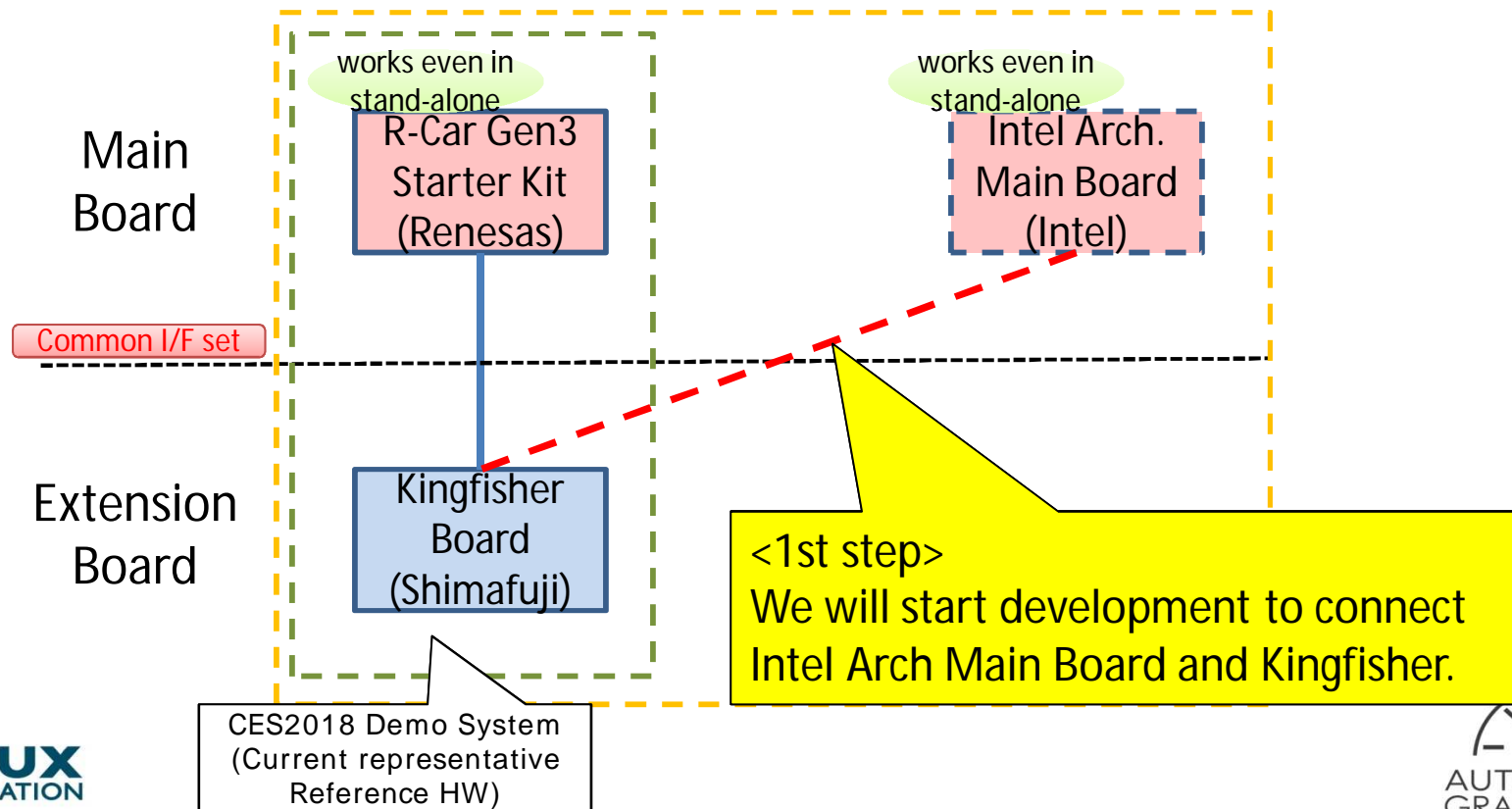- Spec V0.1.0 (Open Draft) was published on October 18, 2017.

https://wiki.automotivelinux.org/_media/eg-rhsa/agl_referencehardwarespec_v0.1.0_20171018.pdf

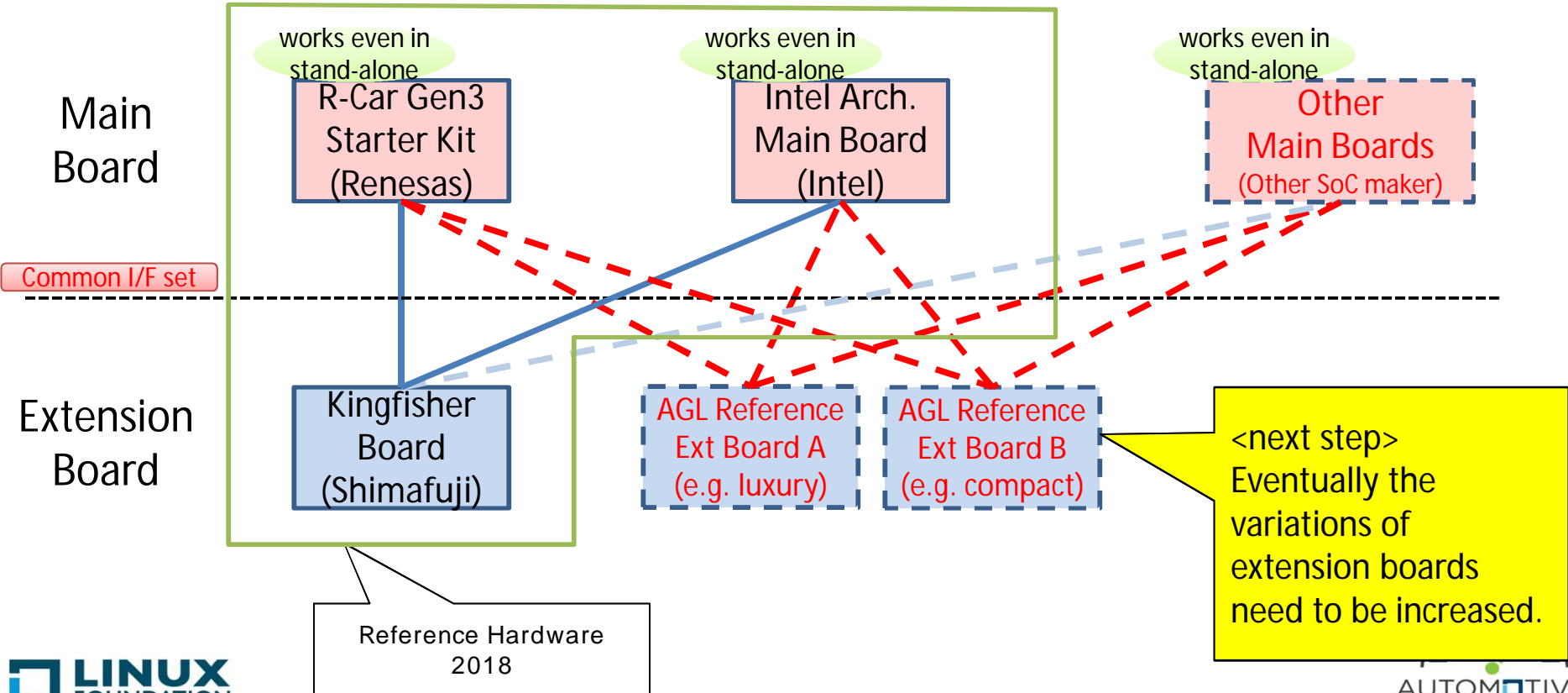Major Policy : Main board and Extension board can be combined freely.

(b) Reference Hardware Development (2018)

Collaboration between RHSA-EG and Renesas, Intel, Shimafuji

(b) Reference Hardware Development (next step)

Collaboration between RHSA-EG and SoC vendors

Main Board

works even in stand-alone

R-Car Gen3 Starter Kit (Renesas)

works even in stand-alone

Intel Arch. Main Board (Intel)

works even in stand-alone

Other Main Boards (Other SoC maker)

Common I/F set

Extension Board

Kingfisher Board (Shimafuji)

AGL Reference Ext Board A (e.g. luxury)

AGL Reference Ext Board B (e.g. compact)

Reference Hardware 2018

\<next step\> Eventually the variations of extension boards need to be increased.

Schedule