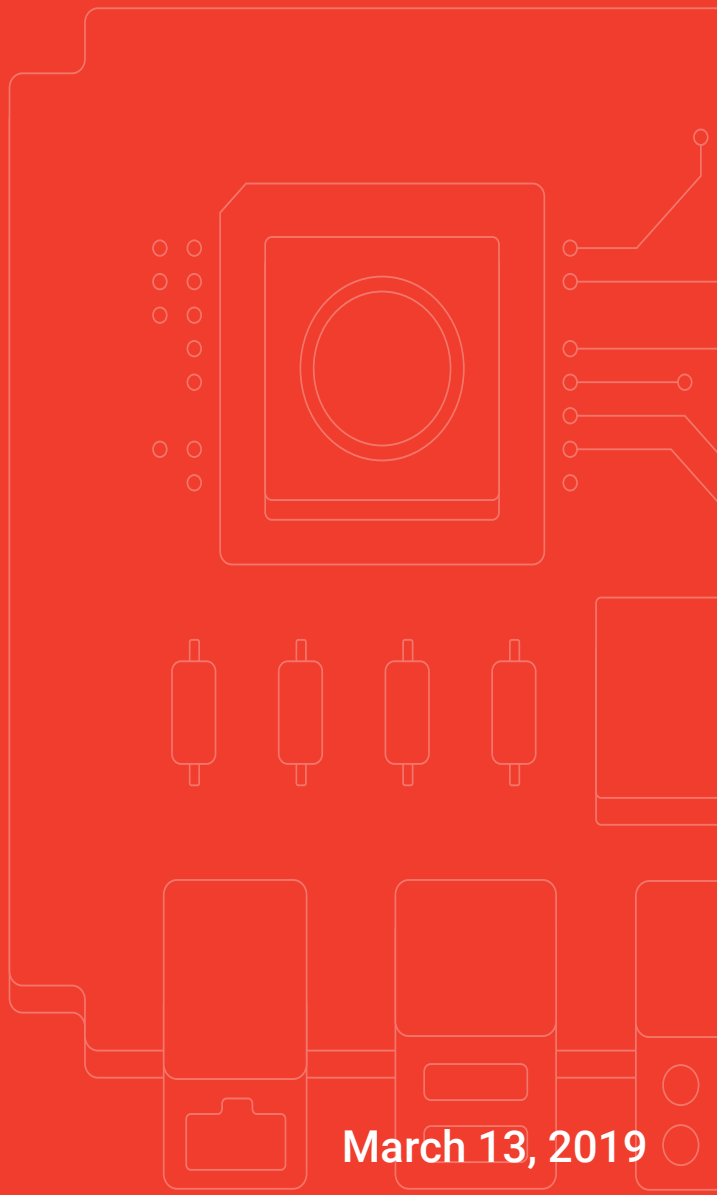
Zagreb, Peering Days 2019

Telecom Rebooted

Luka Perkov · Davor Popović

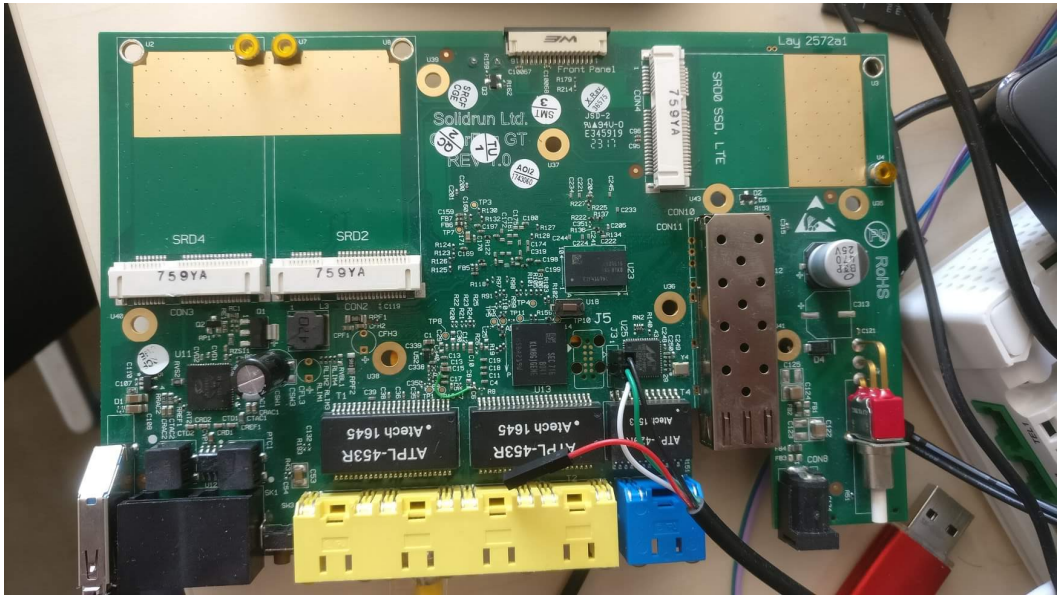


sartura

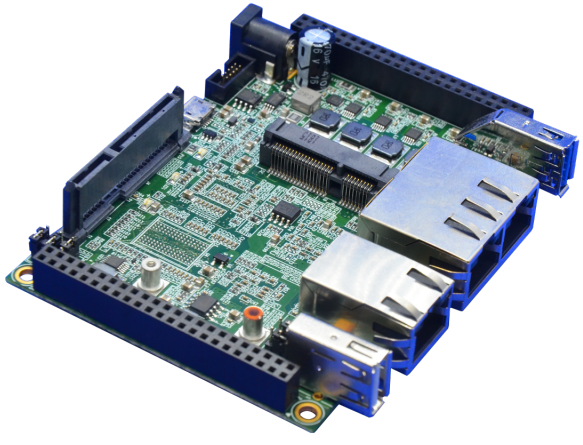
March 13, 2019

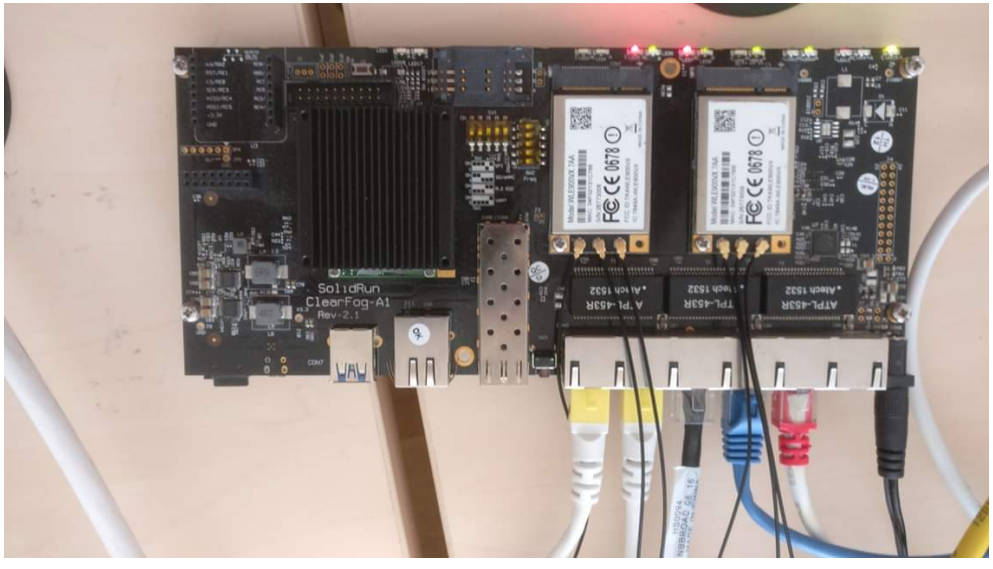
About Sartura and presenters

- Luka Perkov, Davor Popović
- Delivering solutions based on Linux, OpenWrt and Yocto
  - Focused on software in network edge and CPEs
- Continuous (commercial) participation in Open Source projects

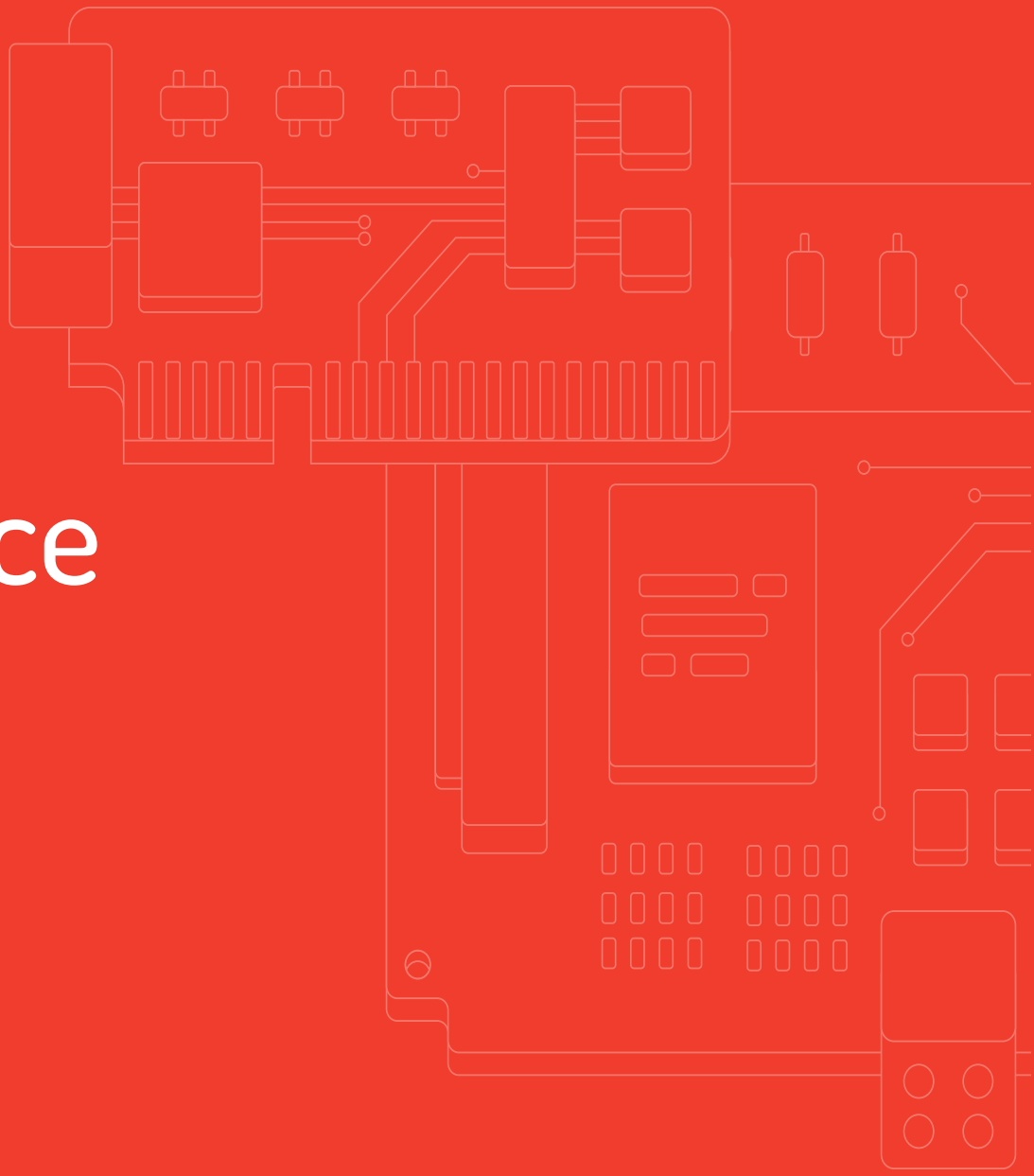

Lay 2572a1
Solidrun Ltd.
SRD4
SRD2
759YA
759YA
SRD0 SSD, LTE
ATPL-453R
Atech 1645
ATPL-453R
Atech 1645
RoHS

Marvell MACCHIATOBin - Rev 1.3




SolidRun
ClearFog-A1
Rev-2.1

Our experience



Telecoms progress slowly

- Overpriced services
- Little difference in offering between ISPs
- Users are given black boxes with limited functionality
- Time-consuming process of deploying new services

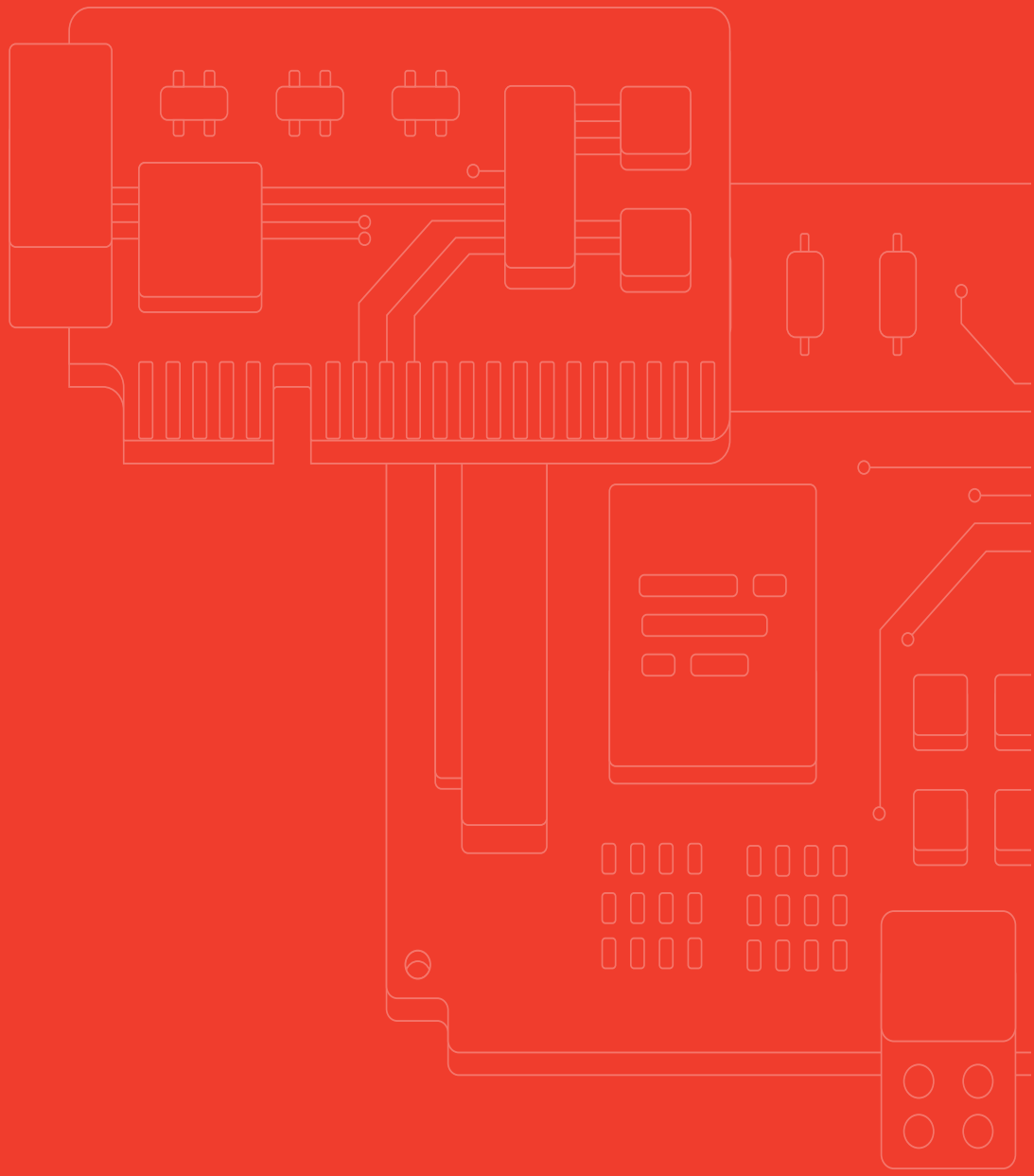
Antiquated software & underperforming hardware

- Market drives equipment quality down
  - Impacts both software and hardware
- Major security vulnerabilities
  - Numerous security exploits over the recent years
  - Growth of IoT introduces more vulnerabilities

Vendor lock-in

- Populated with proprietary, single-purpose platforms
- Software & hardware vendor lock-in
- Limited control over devices and services
- Inability to update & upgrade software

Our vision



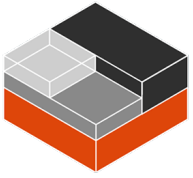
A different approach

- Working on next-gen solutions with partner network
- Complete control over network
  - Bare metal
  - Virtualization

Open Source technologies

- Full control over **all** software
- Latest features and security fixes
- Easy and fast adaptation of new services

OvS Open vSwitch



LXC

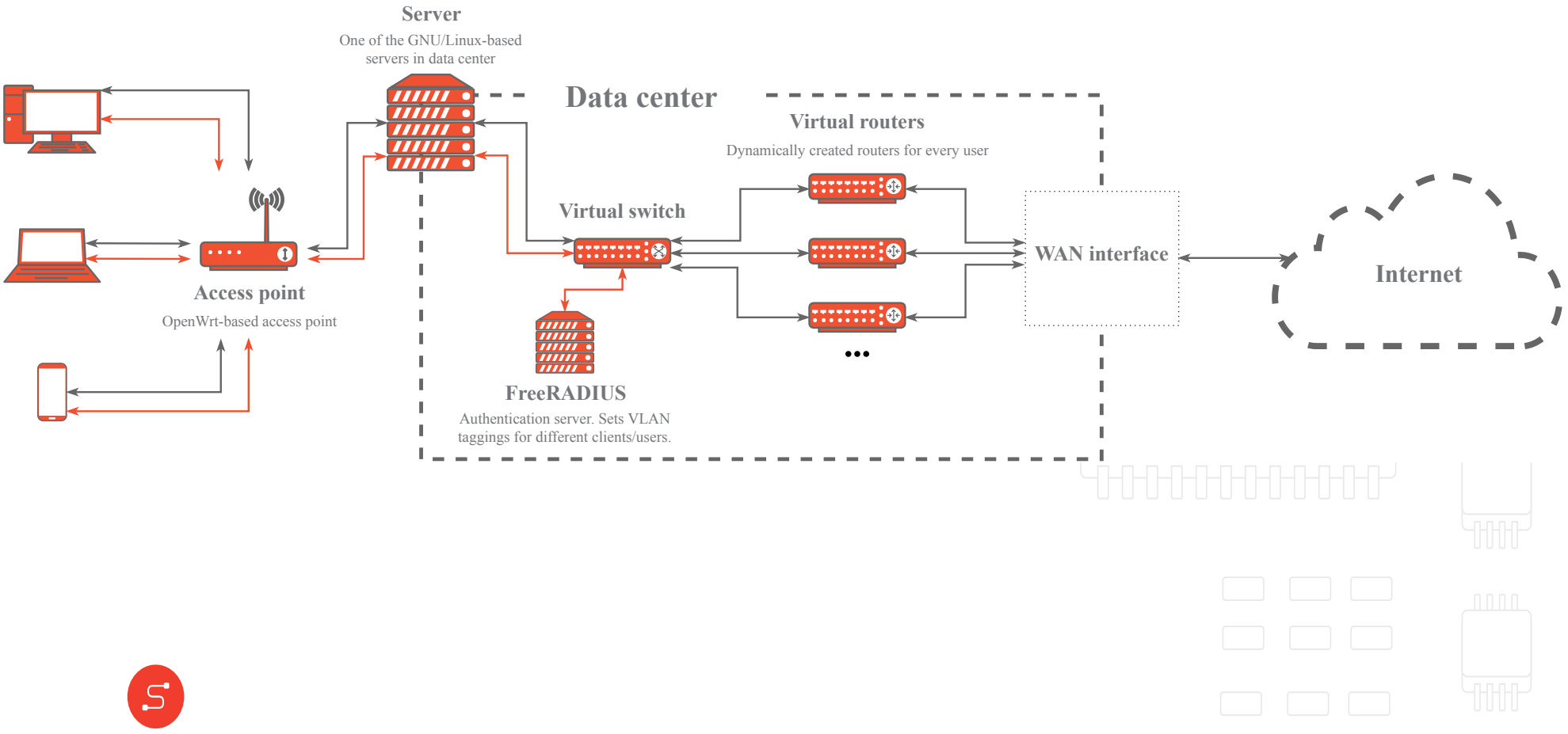
uboot

gentoo linux™

OpenWrt Wireless Freedom

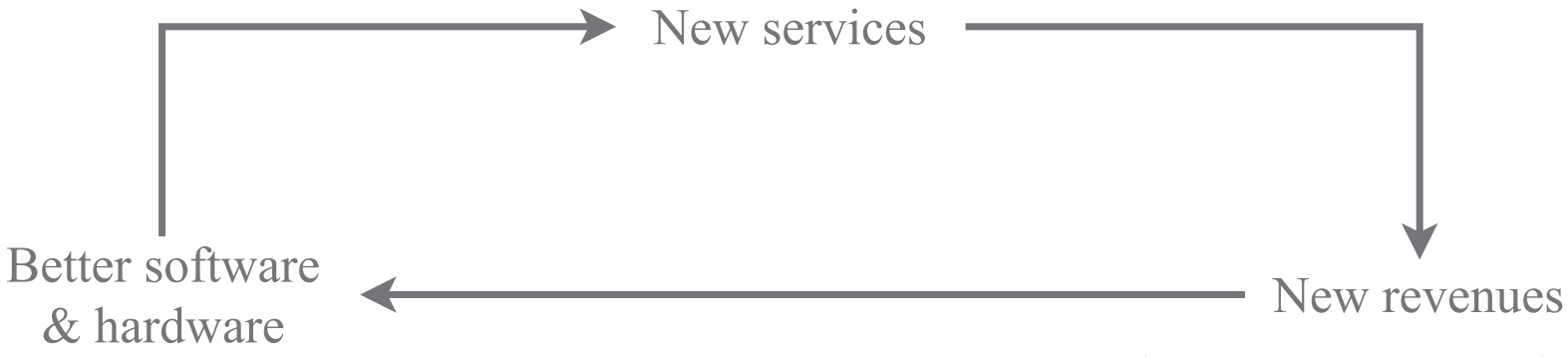
Optimal hardware at every layer

- Collaboration with chipset vendors and OEMs
- Handpicked components from data center to on-field CPEs
- Based on ARM processors with low power consumption
- Reducing both capital and operational costs


Server
One of the GNU/Linux-based servers in data center
Data center
Virtual routers
Dynamically created routers for every user
Virtual switch
WAN interface
Internet
Access point
OpenWrt-based access point
FreeRADIUS
Authentication server. Sets VLAN taggings for different clients/users.

More than just connectivity

- Differentiation by services
- Providing quality and diverse services
  - Entertainment, security, IoT
- Wholesale technology provider
  - Development of custom functionalities


New services
New revenues
Better software
& hardware

Telecom Rebooted

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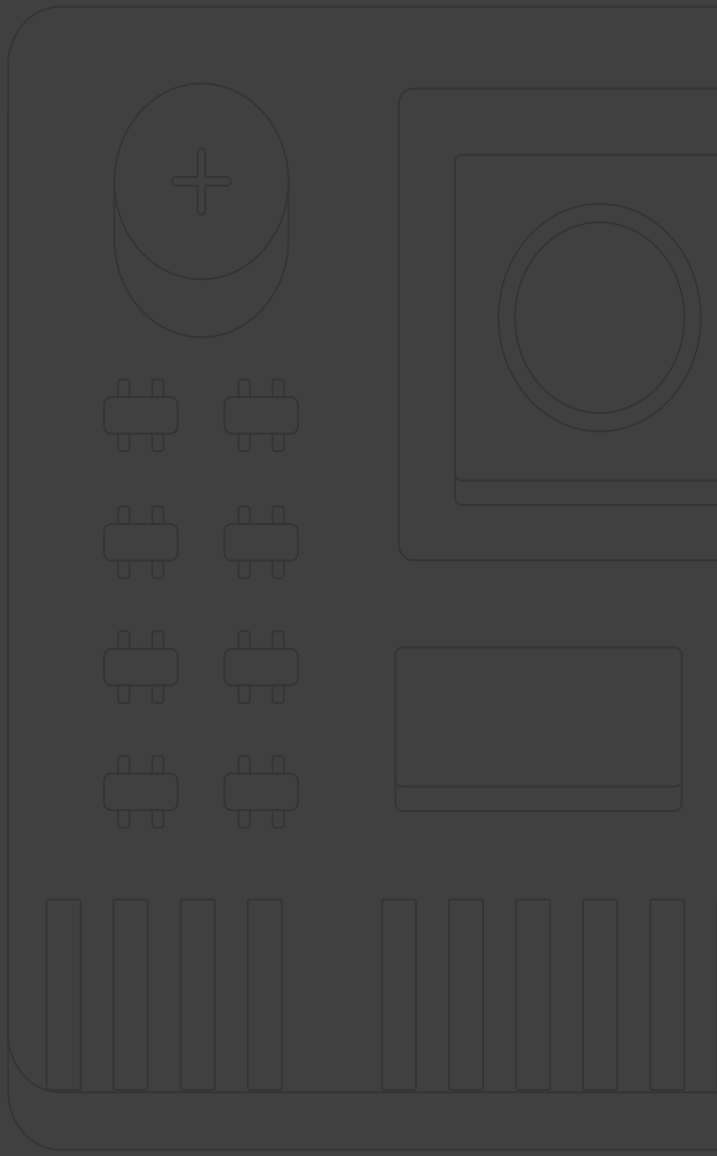

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