Next generation ecosystems for next generation mobility

Mike Thoeny
President, Automotive Business Group, Flex

September 27, 2022
Insight across industries

Flex

- $26 billion FY22 revenue
- 20+ years sustainable manufacturing
- 30 countries
- 170k employees
- 1k customers
- 16k suppliers

Automotive

- $3 billion FY22 revenue
- 15+ years automotive history
- 30+ sites
- 16k+ employees
- 200+ customers
- 4k+ suppliers

Automotive

- 30+ countries
- 1k customers
- 16k suppliers
A shifting landscape

Megatrends transforming the future of mobility

New technologies driving increased computing power and performance

Changing business models evolving the supply chain dynamics

And, of course, component shortages are impacting the entire mobility industry
The megatrends that are transforming mobility

**Sustainability and emissions**
Heightened environmental expectations and government regulations to reduce CO₂ and improve fuel economy

**Safety and convenience**
Drivers expect built-in safety and a seamless driver experience, while governments advance 5-star safety requirements

**Seamless connectivity**
Networked to edge / cloud for user connectivity, over-the-air software updates, and smart highways

**Autonomy: MaaS and DaaS**
Strong business case for mobility and delivery as a service, anticipating shift in vehicle ownership
Global automotive semiconductor demand is driven by the rise of the software-defined vehicle

**AUTOMOTIVE SEMICONDUCTOR DEMAND ($B)**

- **$47B**
  - 11% CAGR

- **$101B**
  - 18% CAGR
    - Autonomous Compute Semi
  - 20% CAGR
    - xEV Drive System Semi

---

Past

Future

Source: Strategy Analytics (2022), Gartner (2022)
Mobility is shifting to an ecosystem supply structure

**Yesterday**
A highly rigid traditional OEM / Tier 1 / Tier 2 business model acts as a chain of command

**Tomorrow**
Mobility providers work with an ecosystem of partners to develop faster, launch smoother, and support longer

Source: S&P Global Mobility (2021, adapted)
Ecosystems, semiconductors, and collaboration

New avenues for information
OEMs are creating IP and participating in the full planning and sourcing process

Complex products drive collaboration
Scalable compute and advanced technologies accelerating the need for new ecosystems

Clear opportunities for everyone
Early engagement creates faster time-to-market, cost-efficiencies, and end-product quality

For example

Flex has scalable compute reference platforms for three different SoC providers, which has allowed us to get ADAS Compute Modules to market in under 12 months. This is only possible when all parties work closely together.
Global flexibility is key in our new supply reality
Quickly adjust to changing regional, trade and manufacturing dynamics

1. Produce in-region or rapidly shift production locations as needed
2. Identify impacts and react to any supply or resource disruptions
3. Lower inventories, move faster, ensure product availability
4. Anticipate the impact of potential changes in tax and trade policies
5. Provide greater resiliency with deep collaboration
6. In-region sourcing for more sustainable business practices
Collaborating for a more predictive supply chain

New ways of working and new ways of thinking to solve long-standing problems

- Inaccurate forecast data reverberates throughout the entire supply chain
- No inherent incentive to collaborate or be transparent with suppliers or peers

Provide true demand data through broad collaboration and trusted third parties.
A next generation ecosystem is key to the future of mobility

Our current reality...

• New mobility technologies and OEM-led IP are rapidly driving more software and semi content in vehicles
• Component supply challenges will continue and there will be clear growing pains in this supply transition
• Semi technologies and continued investment in innovation will be key to delivering safer and more sustainable mobility

...requires a new approach

• OEMs need a cooperative ecosystem approach given the complexity of new technologies
• This new ecosystem will drive changing profit pools
• Beyond technology innovation, supply chain innovation is required to enable true demand visibility and transparency