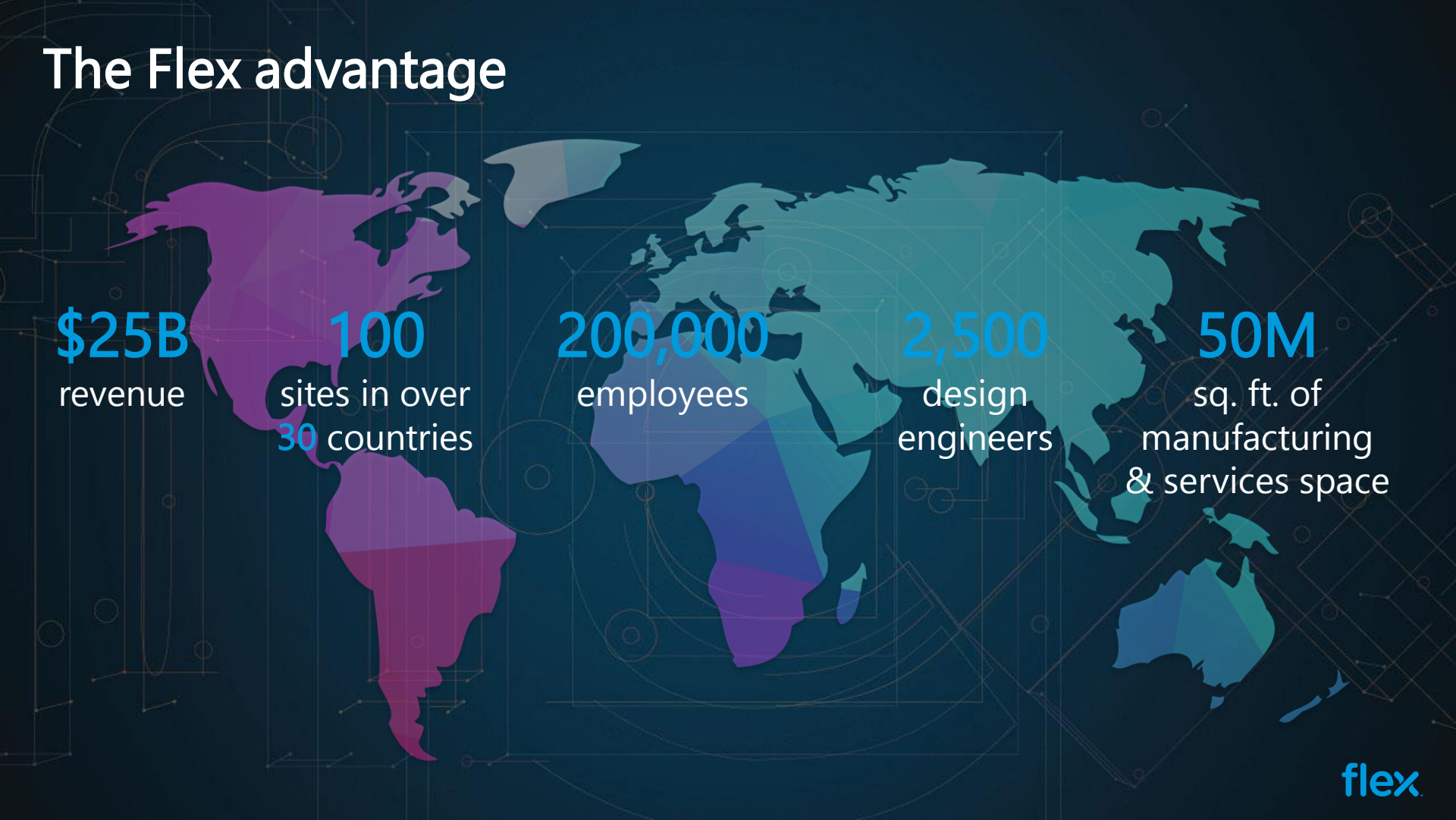
Building a smarter future

The Flex advantage



$25B
revenue

100
sites in over
30 countries

200,000
employees

2,500
design
engineers

50M
sq. ft. of
manufacturing
& services space

flex

IoT Convergence Across Industries

Healthcare	Automotive	Industrial	Home Appliances	Capital Equipment	Energy
$2 Billion	$2 Billion	$1 Billion	$1 Billion	$1 Billion	$2 Billion

Datacom	Telecom	Server/Storage	Wearables	Connected Living	Smartphones
$3 Billion	$3 Billion	$2 Billion	$1 Billion	$1 Billion	$2 Billion

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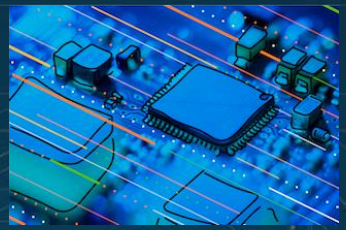
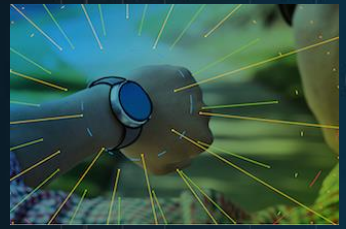
Flex Connected Living – Industry Expertise

Computing & Security



Sensors & Actuators

Human Machine Interface



Flexible Technologies & Miniaturization

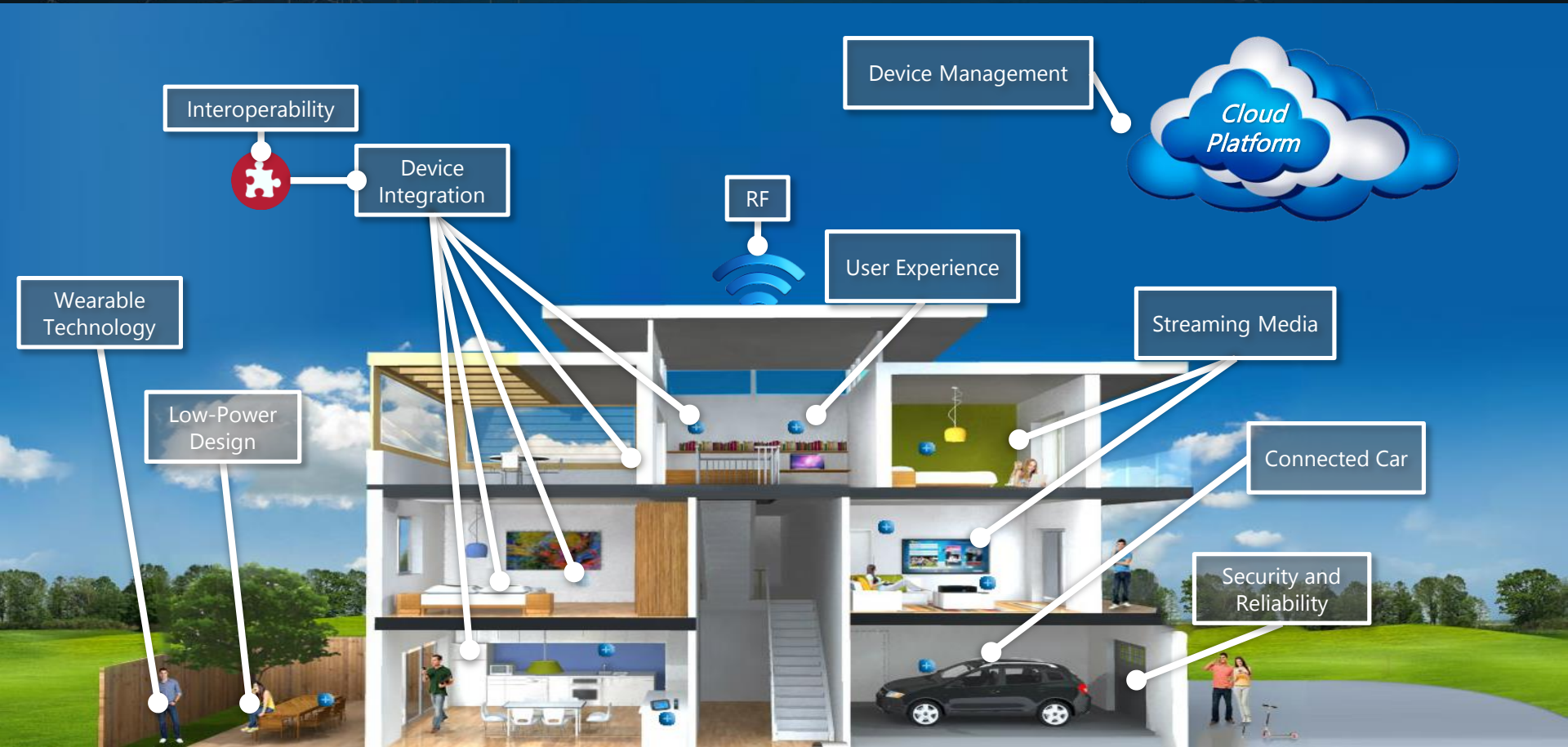
Technology Centers of Excellence (CoE's)

Connectivity

Battery & Power

Smart Software

Flex Connected Living – Industry Expertise



Flex Connected Living – Sketch to Scale™ Services

Special

Connected Intelligence

End-to-End Application Platform to bring your product and its data from the bare metal up to the cloud. Available with embedded software, mobile app, administration portal, and data science plugins.

Proactive Technology Management

Reference Product Designs and Market Roadmaps

Design Conceptualization

Market Experts help develop the best possible technology innovation

Cradle-to-Grave Product Management

Industry leaders provide a seamless transition from concept to factory

Detailed Product Design

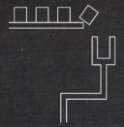
World-class cross discipline design teams in perfect harmony

Interoperability Services

*End-to-End Product Ecosystem testing in real world environments like the **Georgia Tech Aware Home***

Device Certifications

Regulatory, Industrial, and Safety certification management including firmware development and test management.



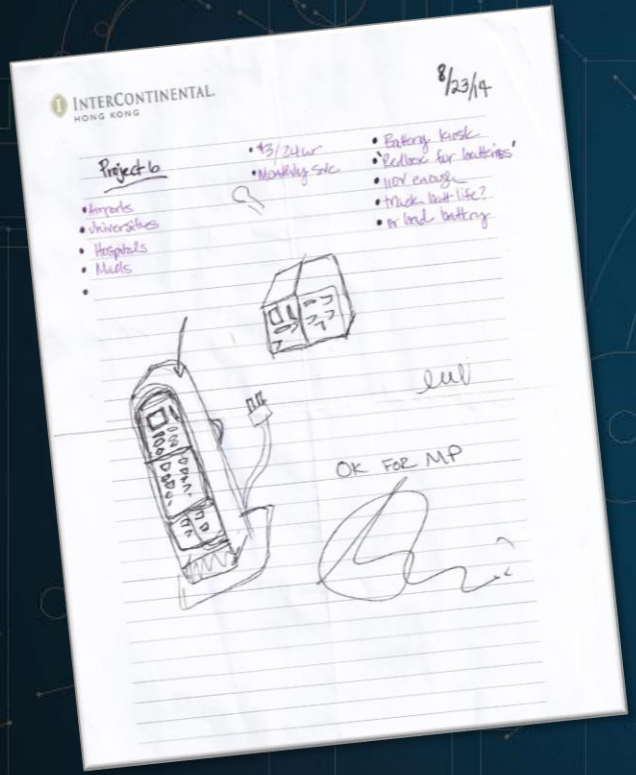
Supply Chain Management

Component supply management and cost optimization leveraging one of the world's largest buying networks

Production Scale

From startups to blue-chip, Flex's global production capabilities are trusted by more innovators worldwide

Flex Connected Living – Sketch to Scale™ Services



powered by SIERRA WIRELESS™

4G LTE

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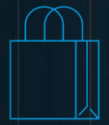
Flex IoT Platform – Sketch to Scale™

1 **Things**

Devices with IoT-Agents

Consumer Health

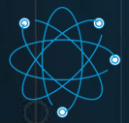
Connected Home



Fashion

Digital Sport

Industrial



Energy

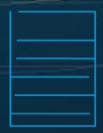
2 **Connectivity**

IoT-API's, Protocols & IoT Connections

3 **Data**

IoT-Core Cloud

Connect to any cloud, application or data source



wink

amazon

AirVantage

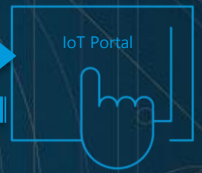
IBM

nest

Ayla

4 **Intelligence**

IoT Portals, IoT Engines, IoT Lens & Analytics



Device Management Portal with data insights and built in analytics

IoT Lens & Analytics

5 **Action**

IoT-Apps & IoT-Commerce

Mobile & Web Apps and new product sales with eCommerce opportunities

IoT Commerce

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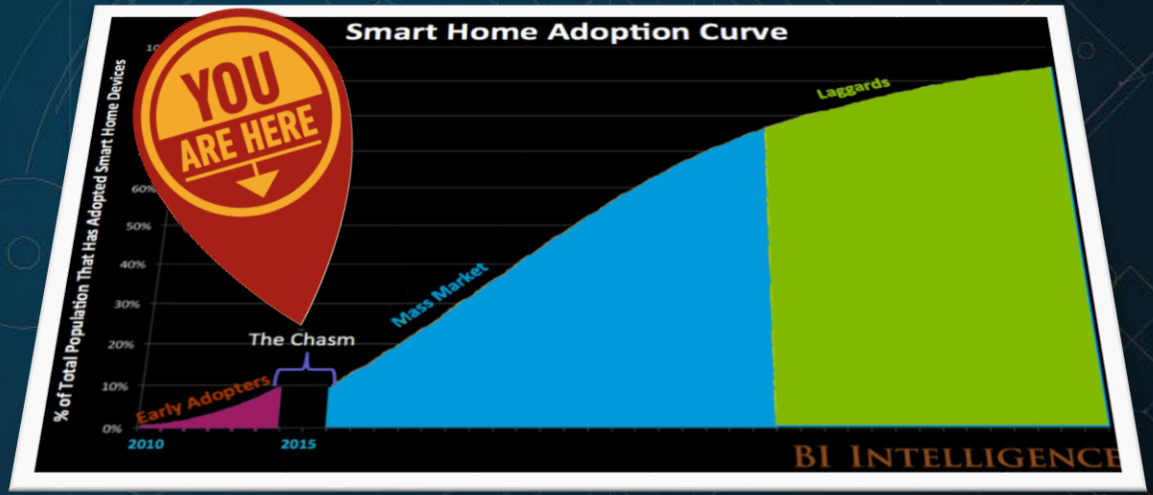
Interoperability is the Key to Product Success



Interoperability is the Key to Product Success

- 5,000 sq.ft. 4-story house on Georgia Tech's campus, administered by Flex
- 150+ Smart Home Devices installed and monitored for network performance and device analytics
- Data collected and analyzed with Flex Cloud Management service
- Flex connected living product interoperability testing
    - Flex Gateway ↔ Flex Nodes
    - Flex Gateway ↔ OEM Nodes
    - OEM Gateway ↔ Flex Nodes

flex CONNECT Laboratories

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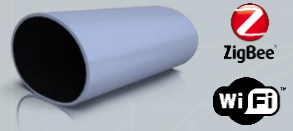
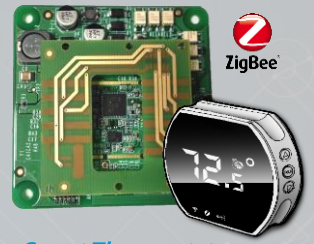
Flex Connected Living – Sample Design Portfolio

Smart Lighting Gateway



Water Flow Monitor

Security Gateway



Smart Thermostat

Multi-sensor

Smart Video Streaming

ZigBee Gateway

Smart Wall Gateway

Smart Button

Door / Window Sensor

Multi-Radio Gateway

Sub-GHz

Multi-Radio Gateway Mini

Low-Cost Gateway

Smart Video Gateway

Appliance Gateway

ZigBee Dongle

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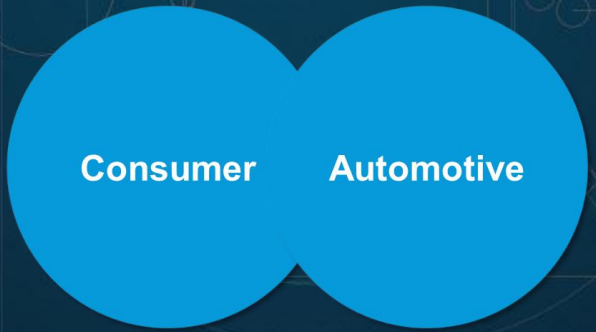
Flex Sketch-to-Scale™ – Automotive Segment

The Automotive Industry is Shifting…

Electric, Connected & Autonomous Vehicles

Innovative Mobility Solutions

…and technologies are converging.



A Fundamental Technology Mismatch

32 month life

137 month average age

(that's over 11 years!)

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The Automotive User Experience

2005 BMW 330i

2016 Tesla X

flex

The Automotive User Experience is Changing

2015 Mercedes F 015 concept

Need to keep up with changes in new products, cutting edge technology, market changes and quickly scale solutions

Flex Innovation Sourcing Programs

Technology Centers of Excellence

Cross Market Perspective

Services to develop and scale new products

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Inventing cars of the future:
Connected Vehicle Communications Platform

- Innovation: Create a V2I system for an OEM
- Technology: Flex delivered prototypes within 16 weeks
- Markets: A solution including embedded, mobile, and cloud technologies
- Scale: Customer now has a solution they can implement

flex

Global Automotive Presence

What Flex brings to the Connected Car

Wearable Device Integration
Wearable integration opens the door to countless personalized safety and convenience uses

Medical Device Connection
Can feed user data to the cloud, and help track that data for personal and physician use

Natural Language Voice Recognition
These technologies let users give the car commands in a natural and intuitive way

Overhead console with upgradable hardware
Transforms an often underutilized space into an upgradable computing hub, while reducing weight & costs, and freeing space in the dashboard

Flexible Displays and Force Touch Displays or Keypads
These displays and inputs help the car display and accept information in new and exciting ways

Biometrics
Biometric integration sets the stage for convenient security, and additional safety uses

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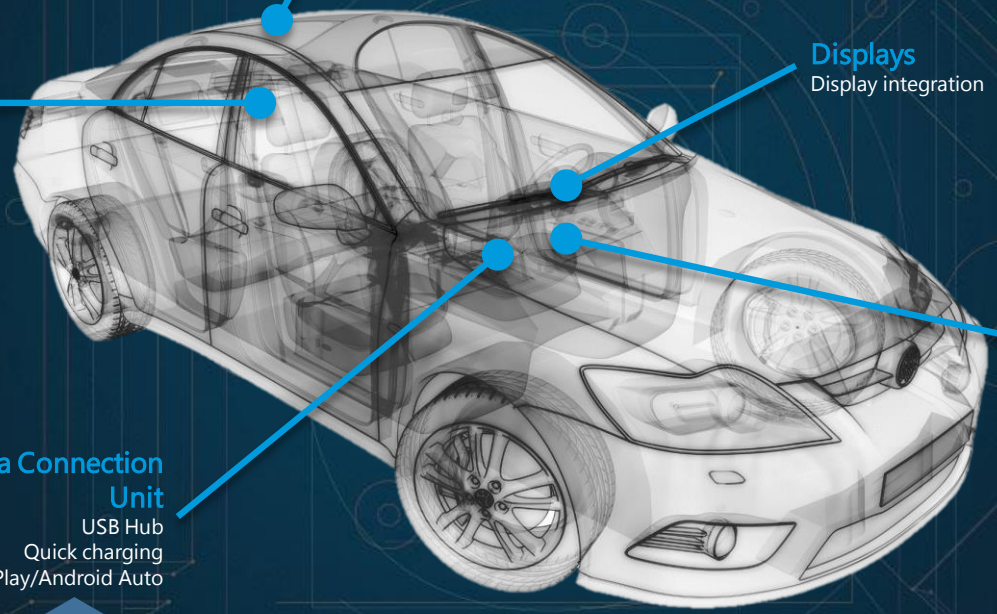
Flex Automotive connectivity offerings



Smart Antenna
Cellular Connection
Audio Tuner
Vehicle to Vehicle

Telecommunication Module
Cellular Connection
GPS
Vehicle to Vehicle

Displays
Display integration

Infotainment
Flexible Business Model
Global Footprint

Multimedia Connection Unit
USB Hub
Quick charging
Apple CarPlay/Android Auto

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Flex in action – TCU Development

LIVE SMARTER