TOMORROW’S CARS, TODAY

Rob Csongor, VP/GM of Automotive
NVIDIA AUTOMOTIVE GROWTH

**Revenue**

- FY16: $320M
- 75% growth from FY15

**Development Platform Shipments**

**Autonomous Driving Engagements**
# NVIDIA OPPORTUNITY

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<th>SAM</th>
<th>$ OPPORTUNITY</th>
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<tbody>
<tr>
<td>Digital Cockpit</td>
<td>20 Million Cars</td>
<td>$2 Billion</td>
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<td>(Premium car makers +10% of the rest)</td>
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<td>Self-Driving Cars</td>
<td>15 Million Cars</td>
<td>$2 Billion</td>
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<td>(Cars that need sensor fusion, processing, deep learning)</td>
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<td>Transportation as a Service</td>
<td>Couple Million Cars</td>
<td>$2-6 Billion</td>
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COST OF MODULES

“Modules, modules and more modules. There's so many modules there. If we were to strip off this car, we'd probably have a basketful of modules -- little black boxes that do something. It's getting out of control. They're very expensive. They're tough to package. They're very complex.

I’d like to see a monster module that controls the entire vehicle and that's easier to upgrade.”

Ralph Gilles, Fiat Chrysler Automobiles Global Design Chief
Automotive News, February 28, 2016
SELF-DRIVING IS HARD

Sensor Fusion

Detection

Localization

Path Planning
THE FUTURE OF CAR COMPUTERS

**Cockpit Computer**
- Two computers replace many ECUs
- Both have access to cameras/sensors
- Multiple OSs & Displays
- Powered by Artificial Intelligence
- Upgradeable SW replaces HW ECUs
- One architecture
- Higher performance, lower total cost

**Cockpit Software**
- GPU Virtualization
- AI - Speech
- Surround View
- Smart Mirror

**Self-Driving Computer**
- Perception
- Localization
- Planning
- Visualization

**Self-Driving Software**
NVIDIA DRIVE™ CX

Scalable from infotainment to cluster to ADAS
Upgradeable SW replaces HW modules
Artificial intelligence
NVIDIA DRIVE™ PX 2

World’s first AI supercomputer for self-driving cars

Scalable from one processor to many systems
STRATEGIES

Artificial intelligence for car computing

DRIVE - one scalable architecture from cockpit to ADAS to mapping to autonomous driving

Upgradable software to eliminate significant costs

Open platform for all developers
INVESTOR DAY 2016

THANK YOU

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