



TRANSPORTATION @ SGS

THOMAS KLUKAS – EXECUTIVE VICE PRESIDENT

INVESTORS DAYS, 29-30 OCTOBER 2015

WHEN YOU NEED TO BE SURE



“ ... Take a look at the cost of a Boeing 787. Fifty percent goes to hardware, fifty percent goes to navigation, guidance, and control. And of that, fifty percent goes to software....

How the systems on a vehicle control that vehicle; how a vehicle talks to ground control; how a vehicle talks to other vehicles; how vehicles collect data and what they do with that data - this is the silent face of aerospace engineering ... ”

Vigor Yang, chair of the School of Aerospace Engineering at Georgia Institute of Technology, Atlanta

“ ... I see two vectors ... the Automotive Industry is really worried about. One is operating systems, all this stuff we're talking about on the road to autonomy, but also on the road to [vehicle] sharing...”

John Krafcik President of TrueCar

“ ... The future of the Automotive industry is going to revolve around two fairly recent phenomenon: the shared economy and autonomous driving....”

Morgan Stanley Analyst Adam Jonas

“ ... Maritime transport is an integral part of international logistics and accounts for 85% of the volume of global trade....

For developing countries, the challenge is to initiate the shift towards sustainable freight transport systems which reflect their respective conditions.... ”

United Nations, Geneva

“... Rail services will focus on the total journey... Integrated journey information and seamless connections to other transport modes will create a hassle-free, holistic travel experience....

Big data and the Internet of Things will pave the way for truly integrated and inter-modal transport solutions....”

Arup's think-tank, London

“... The reality about transportation is that it's future-oriented. If we're planning for what we have, we're behind the curve....” Anthony Foxx, US Secretary of Transportation

- Transportation : Aerospace – Automotive – Marine – Rail
- Focus on Vehicles (Rolling Stock) and Operations
- Expansion of the Service Portfolio through targeted organic initiatives and external growth projects
- Broadening Automotive to Transportation to unlock the potential to grow double digit
- Provide complete solutions to the supply chain and capitalize fully on Transportation Industry's client base
- Big data and Internet of Things will pave the way for truly integrated and inter-modal transport solutions

The global transportation market expected to generate revenues in excess of \$3.8 trillion in 2016 representing 37% growth rate over the last five years



Aerospace Industry is estimated to double the number of commercial planes by 2030



Automotive Industry is being eyed by outside players that want in on the "\$10tn mobility market (10tn miles traveled x \$1/mile)



Rail Industry will focus on the total journey with connections to other transport modes with annual growth rates for Rolling Stock & Services of 7%



With world GDP stable at approximately 3% annually through 2030 the total **seaborne trade** is anticipated to grow by an average of 6% year-on-year.

A major part of the growth will concern emerging economies with Megacities increasing in number and size

**MEGATRENDS AS GAME
CHANGING FORCES**

Megacities -/regions,
Urbanization, Demographic &
Climate Change, Technology

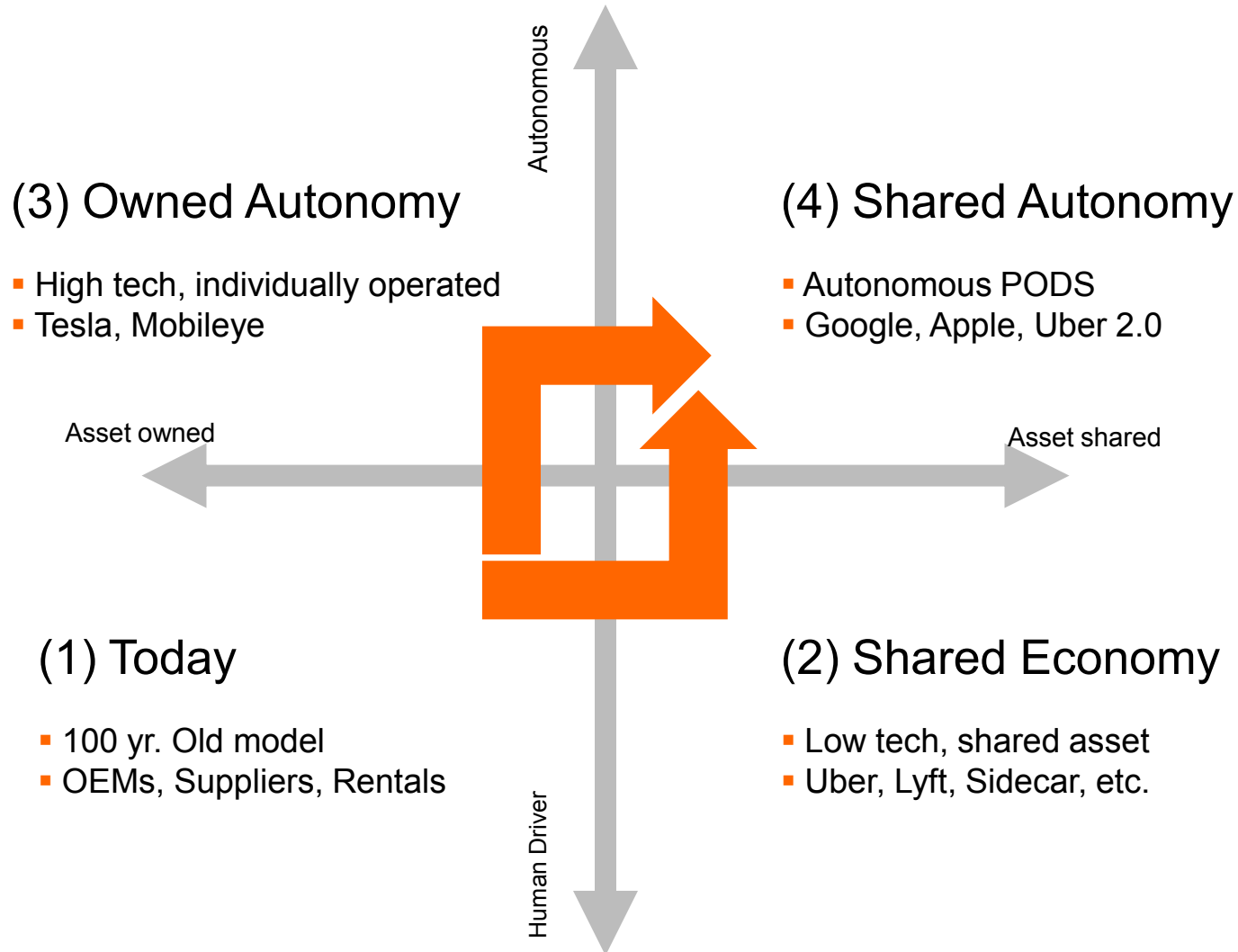
**MORE STRINGENT
GOVERNMENT REGULATIONS**

Increased Fuel Economy,
Reduced Vehicle Emissions

**INCREASING SYSTEM
COMPLEXITY**

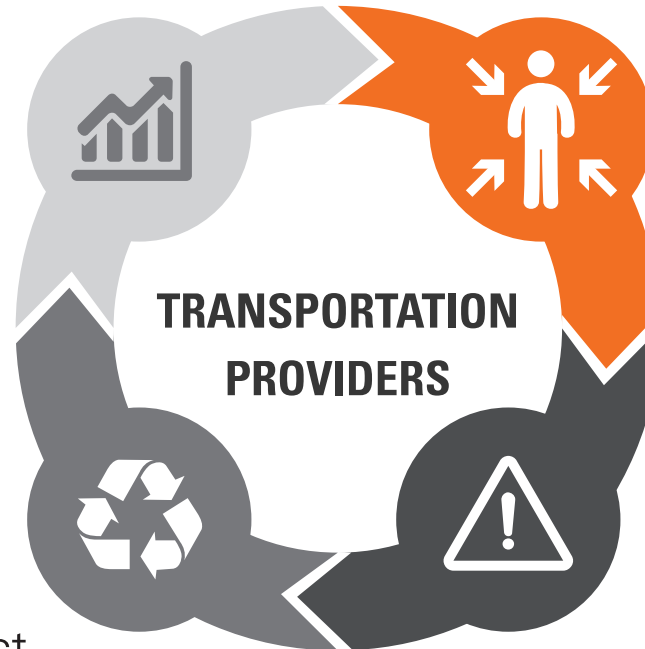
Advanced Assistance
Systems, Connected Vehicle,
V-2-X

- Globally, there are expected to be 153 million vehicles with telemetric connections on the road by 2018



Predict demand
and optimize
capacity assets

Improve operational
efficiency while
reducing
environmental impact



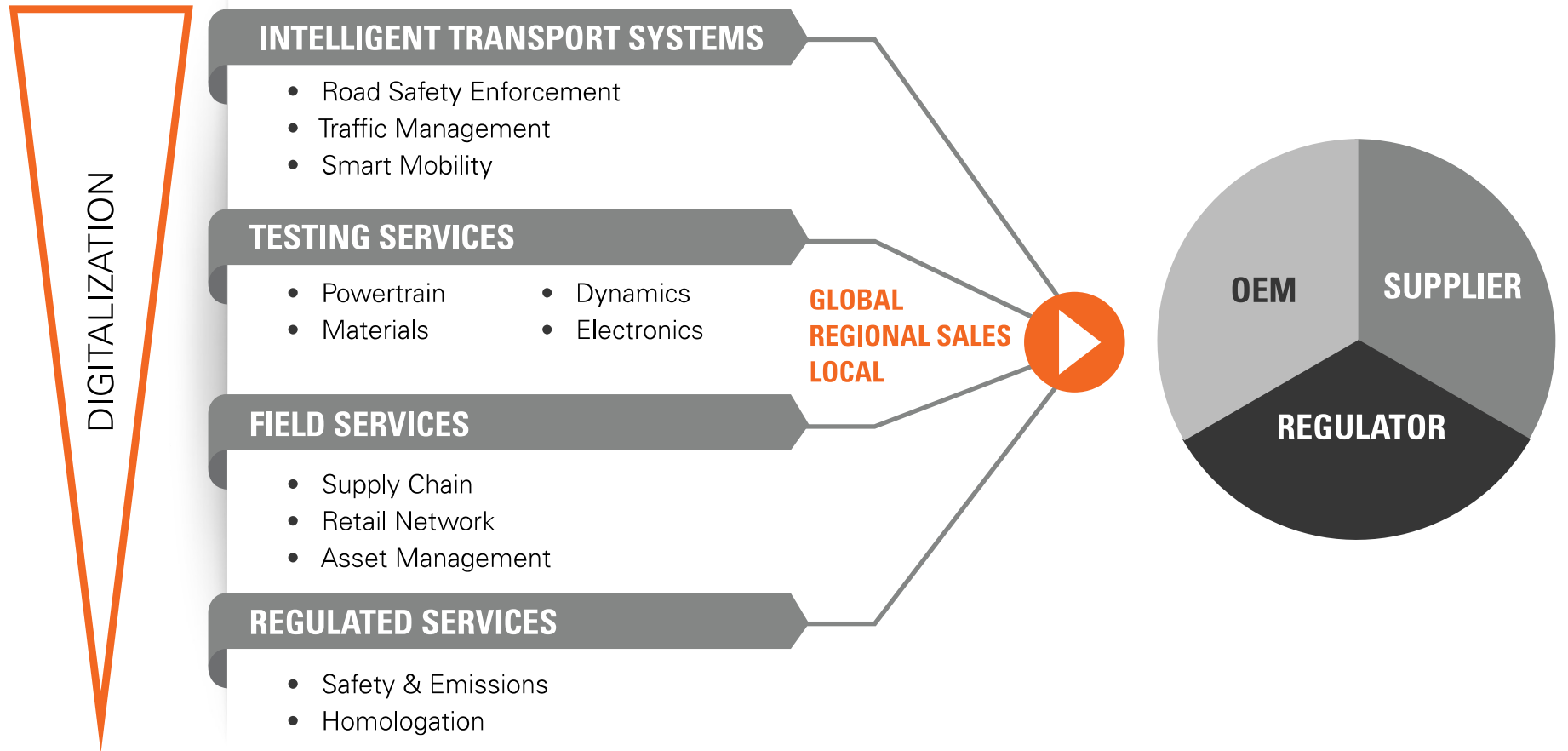
Dramatically improve
the end-to-end
traveler or customer
experience

Assure safety
and security

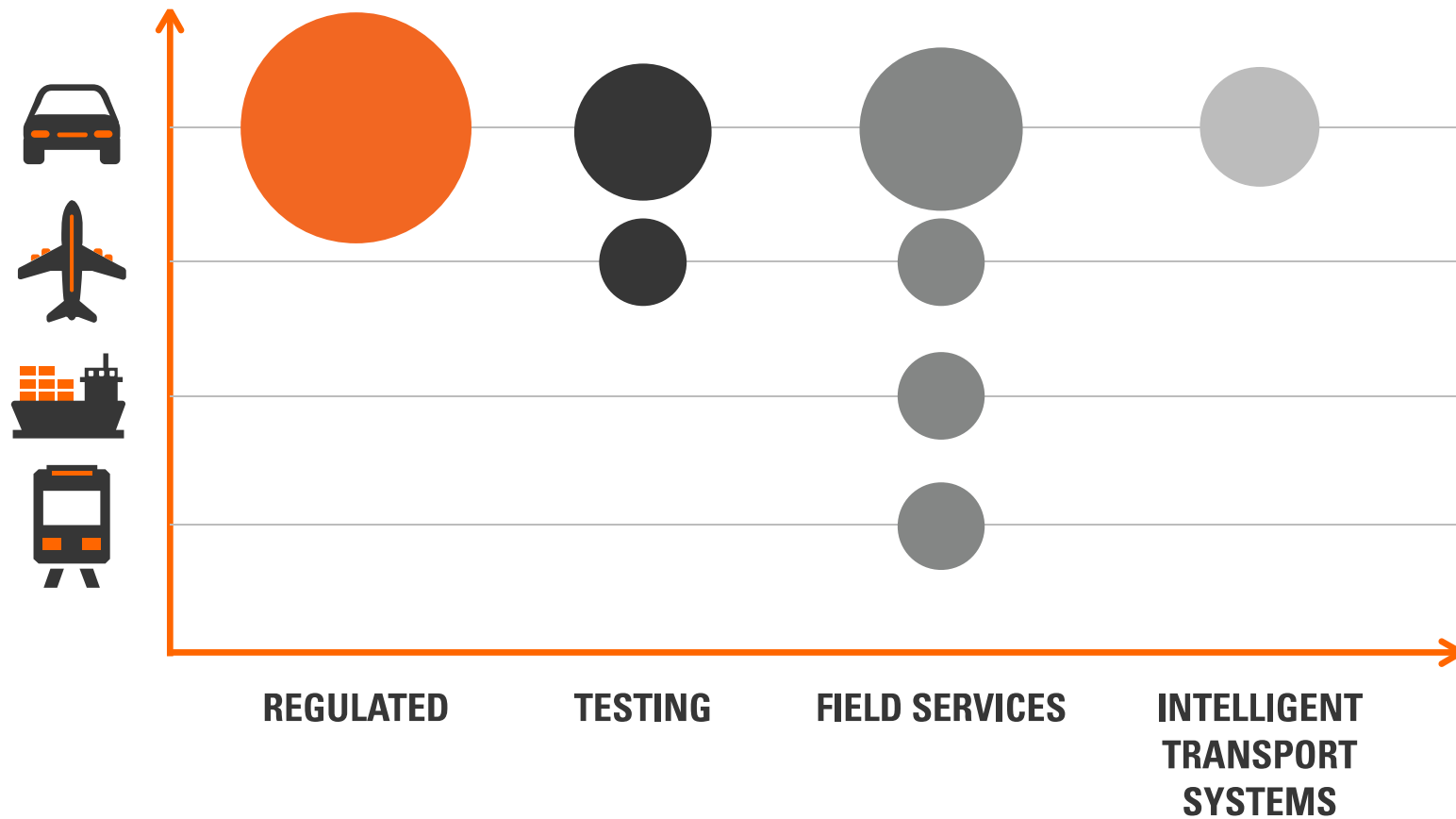
■ MULTIMODALITY IS STILL A DREAM


















- The car is too often the only solution





■ A Business Line with revenue of CHF 450mio



	DEFEND	OPTIMIZE	EXPAND	DIVERSIFY
INTELLIGENT TRANSPORT SYSTEMS <ul style="list-style-type: none"> Road Safety Enforcement Traffic Management Smart Mobility 				  
TESTING SERVICES <ul style="list-style-type: none"> Powertrain Materials Dynamics Electronics 				  
FIELD SERVICES <ul style="list-style-type: none"> Supply Chain Retail Network Asset Management 		   		
REGULATED SERVICES <ul style="list-style-type: none"> Safety & Emissions Homologation 			  	

- Fast Track Lane Open
 - ✓ Strong Sales force onboard focusing on managing accounts leveraging complete solutions to the Transportation supply chain
- 1st Class Service for All
 - ✓ Combining Service Offering for Vehicles and Operations. Ability to leverage SGS' test technologies, network structure across Aerospace, Automotive, Marine, Rail
- Space-based navigational technology activated
 - ✓ Clear priorities and direction for diversification of Service Portfolio and for geographical expansion
- All Accelerators on and ready for departure
 - ✓ SGS *Transportation* cleared to *Grow* going up to *double digit*



SGS