

# INTERNET OF THINGS GET THE WHOLE PICTURE

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Workshop FIESP “A EVOLUÇÃO DA INTERNET DAS COISAS NO BRASIL”  
São Paulo, 29 de julho de 2015

# 1991 vs now



**Radio Shack**  
AMERICA'S TECHNOLOGY STORE

**PRESIDENTS' BIRTHDAY SALE!**  
DON'T DELAY! 3-DAY SPECIALS ABOVE GOOD SATURDAY THRU MONDAY ONLY!

**0% INTEREST!**  
NO PAYMENTS UNTIL MAY!  
NO DOWN PAYMENT!  
HURRY! OFFER ENDS TUESDAY FEBRUARY 19

**COME IN AND TAKE ADVANTAGE OF THESE OTHER FANTASTIC VALUES!**

**INTRODUCTORY SPECIAL!**  
YANDY® 1000 TL/3 Computer System  
Save \$670  
**\$1599**  
Low As \$499 Per Month  
Reg. \$2269.00  
• 286-Based PC Compatible  
• Color Monitor  
• 20MB SmartDrive™ Hard Drive  
• Easy-to-Use 10-in-1 DeskMate® Software  
• BONUS PACKAGE:  
• Lotus Spreadsheet For DeskMate  
• DeskMate Q&A Write  
• QuickKey  
• 2-Button Mouse

**VHS Camcorder**  
Save \$100  
**\$799**  
Low As \$199 Per Month  
Reg. \$899.00  
Realistic Model 952 includes video light for indoor shooting, 2 xlr buttons, 1/4" inch accessories, etc.

**3-Way Speaker With Massive 15" Woofer**  
Save \$110  
**14995**  
Low As \$110 Per Month  
Reg. \$160.00  
Optimum Match™ Two" system bumps out bass you can feel. 4" horn tweeter, 5" midrange, etc.

**All-Weather Stereo**  
Cut 34%  
**1188**  
Reg. \$179.00  
Realistic STEREO-MATE™ AM/FM personal receiver through car stereo, water, fog, etc. \$1188.

**AM/FM Clock Radio**  
30% Off  
**1388**  
Reg. \$198.00  
Chronomatic™ 281 clock radio's compact look cuts right-hand clutter, no case.

**In-Ear Stereo Phones**  
HALF PRICE!  
**788**  
Reg. \$157.00  
Realistic™ in-ear phones weigh just 1/8 ounce! With carry pouch, etc.

**Micro-Thin™ Calculator**  
39% Off  
**488**  
Reg. \$79.00  
Radio Shack EC-412 is almost the size of a credit card! Solar powered, etc.

**Mobile Cellular Telephone**  
Save \$100  
**\$199**  
Low As \$19 Per Month  
Reg. \$299.00  
Realistic™ mobile cellular phone lets you talk on the go. 100% mobile, etc.

**Deluxe Portable CD Player**  
Save \$40  
**15995**  
Reg. \$199.95  
Realistic CD-3250 has 10-seconds memory, etc.

**Tiny Dual-Superhet Radar Detector**  
Save \$60  
**7995**  
Reg. \$35.95  
Road Patrol™ XC™ detector lets you drive with confidence. Separate X and K-band tones, etc.

**Compact 10-Channel Desktop Scanner**  
Save \$30  
**9995**  
Reg. \$29.95  
Realistic PRO-57 lets you catch the news as it happens! Hear police, fire, etc.

**Mobile CB With Channel Controls on Mike**  
HALF PRICE!  
**4995**  
Reg. \$9.95  
Realistic TRC-430 lets you get highway info or help—no 3 turner have to drive "dumb", etc.

**Our Easiest-to-Use Phone Answerer**  
Cut 17%  
**4995**  
Reg. \$59.95  
DUSPHONE™ 2AD-241 answerer is ready to use—just plug it in. Has built-in announcement, etc.

**20-Memory Speed-Dial Phone**  
Cut 33%  
**2995**  
Reg. \$44.95  
Radio Shack ET-292 2-line power-on speed-dial phone. 20 memory, etc.

**Handheld Voice-Activated Cassette Tape Recorder**  
40% Off  
**2995**  
Reg. \$49.95  
Realistic CTR-85 makes an excellent "dictator" for students, secretaries, etc.

Check Your Phone Book for the Radio Shack Store or Dealer Nearest You  
Most Major Credit Cards Welcome

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You'd have spent \$ 3055 in 1991 to buy all the stuff in this ad that you can now do with your phone.

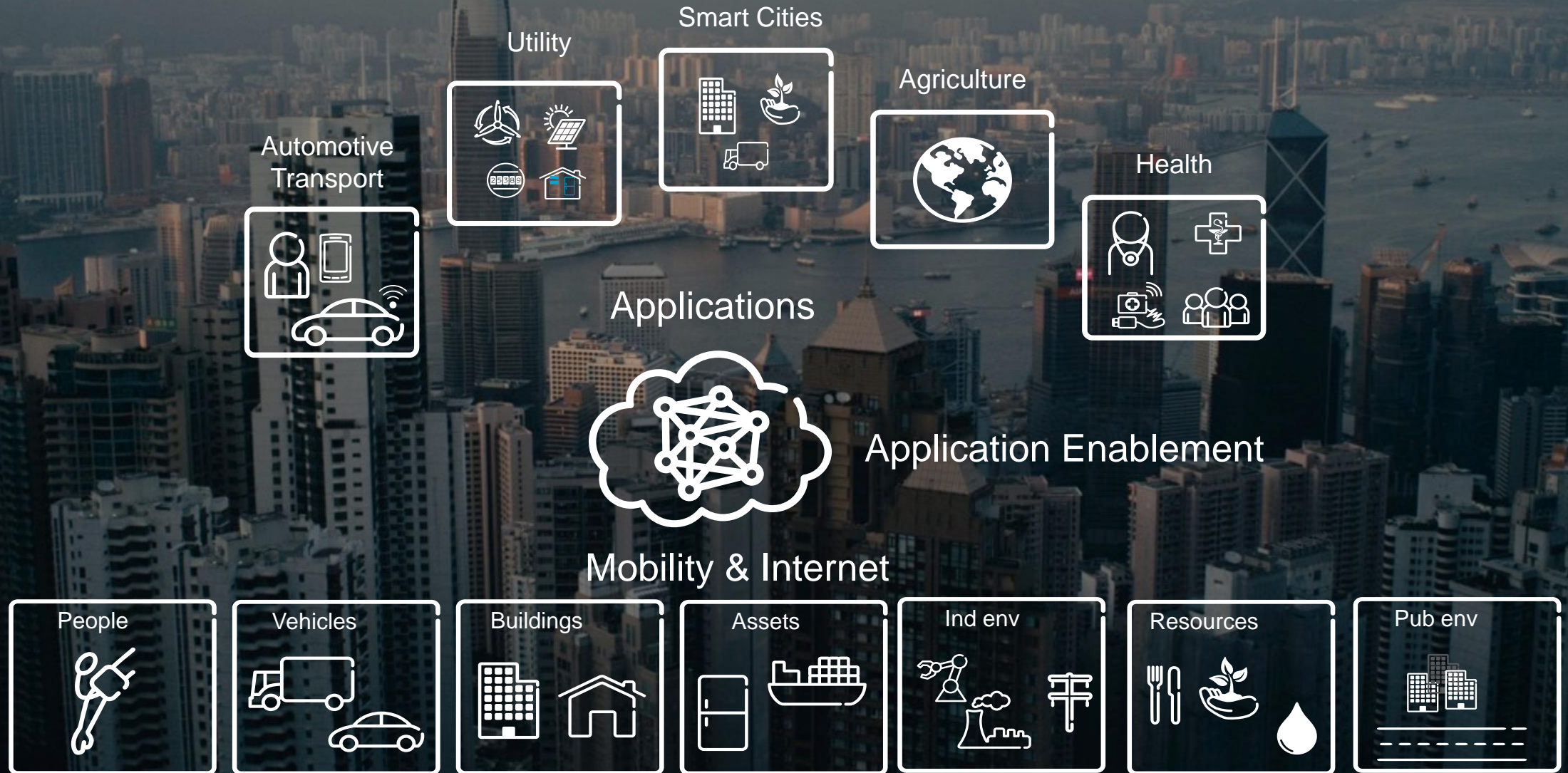


# Outlook 2020



Mobile Subscriptions	9.2 Bn	
MBB Subscriptions	7.7 Bn	>2X
Smartphone Subscriptions	6.1 Bn	
Mobile Data Traffic (EB/Mo)	30.5	>9X
Video Traffic	60%	
Population Coverage	90% WCDMA, 70% LTE	

# Internet of Things

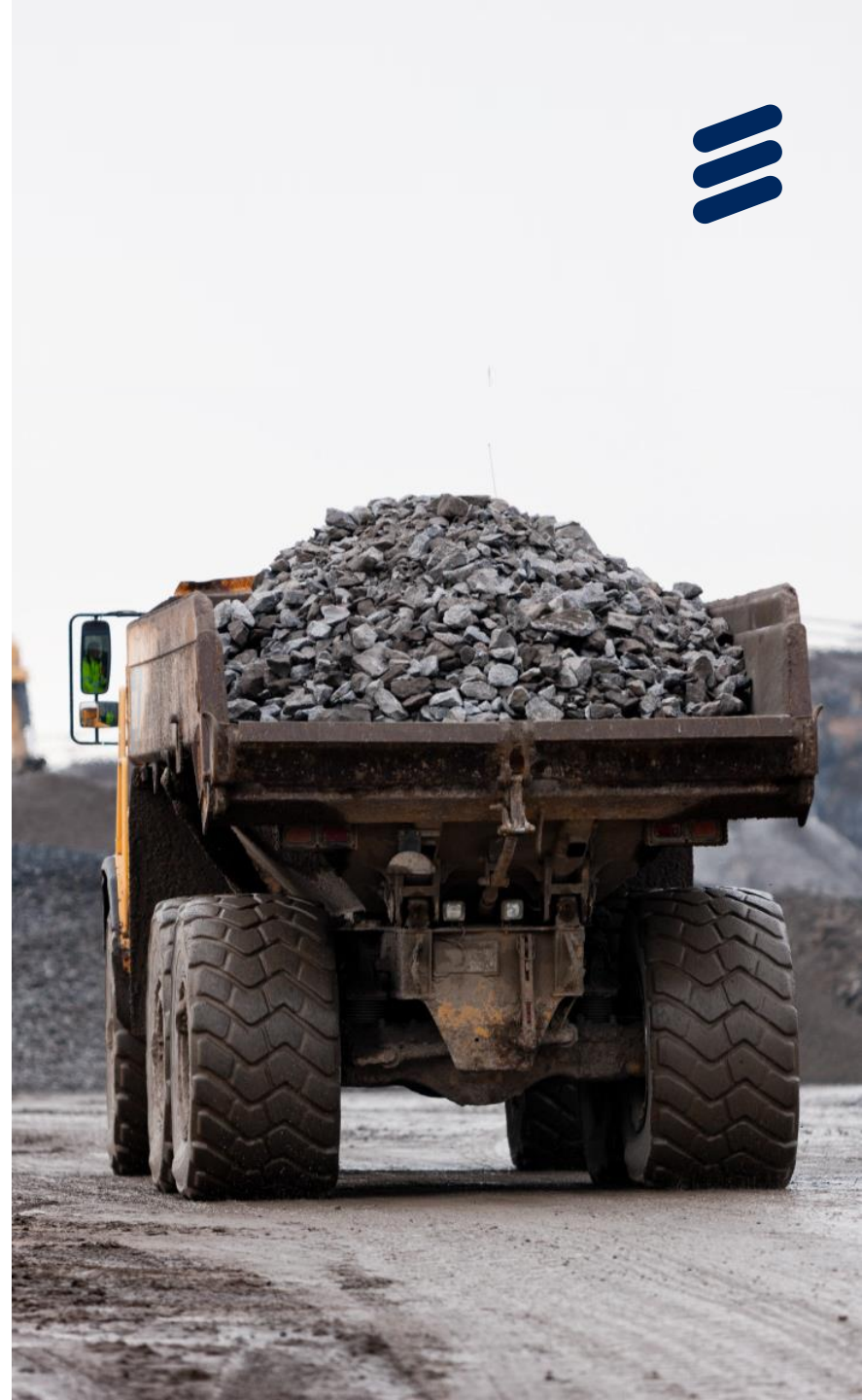






\$1.9  
trillion

Predicted value-add  
across sectors in 2020  
(Gartner)





# Mastering the digital transformation process



## DEVELOPING KEY SUCCESS FACTORS:

- › Leadership and institutional capabilities
- › Enabling policies and regulation
- › A high-quality Broadband & IT infrastructure



MOBILITY - BROADBAND - CLOUD

# INDUSTRIES LEADING THE WAY



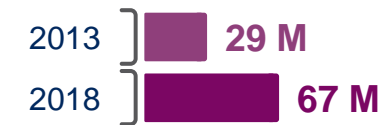
## AUTOMOTIVE



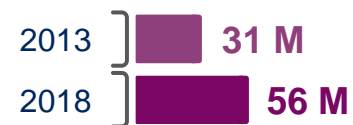
## INDUSTRIAL



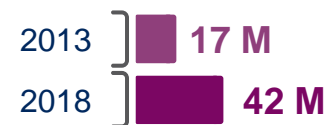
## TRANSPORT



## UTILITIES



## HEALTHCARE



## SECURITY





# CURITIBA 3G BUSES



Curitiba's 3.2 million citizens in southern Brazil and its Public Transport Operators are benefiting from an electronic ticketing and fleet management system. The city's bus fleet serves 2.4 million passengers daily and is connected through a high-speed mobile broadband network that provides up-to-the-second information on a range of services.



Curitiba's smart transport solution has been recognized at UNFCCC 2011 as one of 10 inspiring examples.

UNFCCC: United Nations Framework Convention on Climate Change



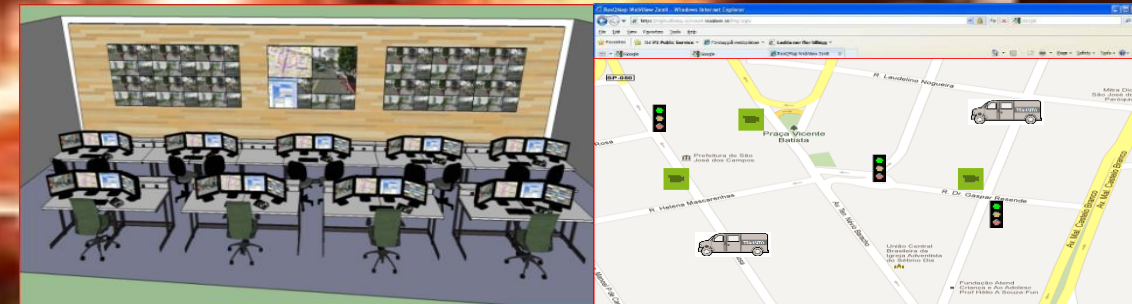
# São jose dos campos,

Traffic management System and public safety



São José dos Campos (0,6M pop.), São Paulo, Brazil, integrated its Traffic Management System and Public Safety System

In the area monitored by a camera the number of criminal incidents (like car stolen, pick-pocketing on bus stops) were reduced by 70%



Real-time incidents tracking, analysis and dispatch. Information shared among Police, Traffic Department, Civil Defense Communications Centers, vehicles and field agents.

# Summary



## OEM / IoT Service Provider needs

- Connectivity
- Integration to business process
- Matching business model
- Global coverage with local flavor
- Support for monetization of services

## Operator needs

- New revenue streams
- New ways to monetize network investment
- Ability to serve OEM / IoT SP with low TCO
- Ability to co-operate with other operators for global coverage

## Opportunities

- New revenue streams beyond traditional network sales
- Transition to new business models for long term recurring revenue
- Grow relevance with Operators and Enterprises in Networked Society





# BRAZIL M2M BENEFITS' REGULATION

## › Background:

- In last Aug, Ministry of Communications and regulator Anatel established regulation for M2M cuts benefits retroactive to May 5<sup>th</sup>.

## › Benefits:

- 78% Fistel (Fund for Telecom Services' Control) taxes reduction for chips used for M2M connections.
- Fistel consists of two taxes: TFI, at the amount of BRL 26.83 (USD 8.94), due upon the activation of each chip, and TFF, amounting to BRL 8.94 (USD 2.98), due on a yearly basis on each chip. The benefits are: TFI reduction to BRL 5.68 (USD 1.89), and TFF reduction to BRL 1.89 (USD 0.63).

## › Definition:

- According to the regulation, M2M connections which will be the object of the benefit are those **“...which, with no human intervention, make use of telecommunications networks to transmit data to remote applications with the purpose of monitoring, measuring and controlling the relevant device, its surrounding environment or data systems connected to the device through such telecommunications networks.”**
- Smart metering and connected cars solutions fit into the definition of M2M connection to be the object of benefits.

	2009	2010	2011	2012	2013	2014	May/15
M2M Connections (000)	2.400	3.000	3.900	6.767	8.297	9.971	10.843



**ERICSSON**