

AVEVA PI WORLD

5G SMART CAMPUS FACENS

A Smart City inside the University

Presented By: Name Prof.a. Dra. Regiane Relva Romano

AVEVA



Smart[®]
Campus
Facens



We are a philanthropic institution



**Highest grading by MEC –
the Ministry of Education
of Brazil**

**Among the Best Higher Education
Institutions in Brazil***

*source: E-mec

- **Founded in 1976**
- **+7.000 graduated engineers**
- **+90% formers placement rate**

LIFELONG LEARNING EDUCATION / INNOVATION CENTERS



HANDS ON!



Smart[®] Campus Facens

Live Laboratory, aiming at solving real problems, connecting the academic community, market, and society, through projects that make the cities more human, intelligent, and sustainable.



Living laboratory which seeks solutions to real problems



Actions guided by Smart Cities principles



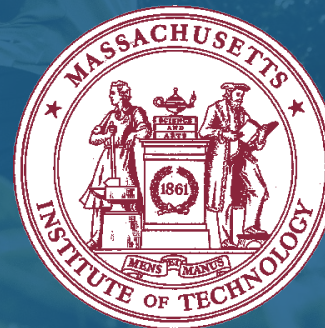
Practical applications and projects on campus



Campus resources are monitored via the dashboard



The program's management strategies were developed in contribution to the M.I.T's G-Lab - (Global Entrepreneurship Lab).



AVEVA

PROGRAM AXIS



ICT



Energy



Urbanization



Mobility
and Security



Governance



Industry
and Business



Education
and Culture



Environment



Health and
Quality of Life



AXIS ALIGNED WITH SUSTAINABLE DEVELOPMENT GOALS



WHAT IS IOT?



Kevin Ashton
@Kevin_Ashton

+ Seguir

In honor of #IoT day on April 9, an updated Internet of Things post on @Medium bit.ly/1xtkwNi

our vision to shrink to that scale. The Internet of Things is the third age of computing. It has the potential to change the world, just as the computer and the Internet did. Maybe even more so.

1

CURTIU
1

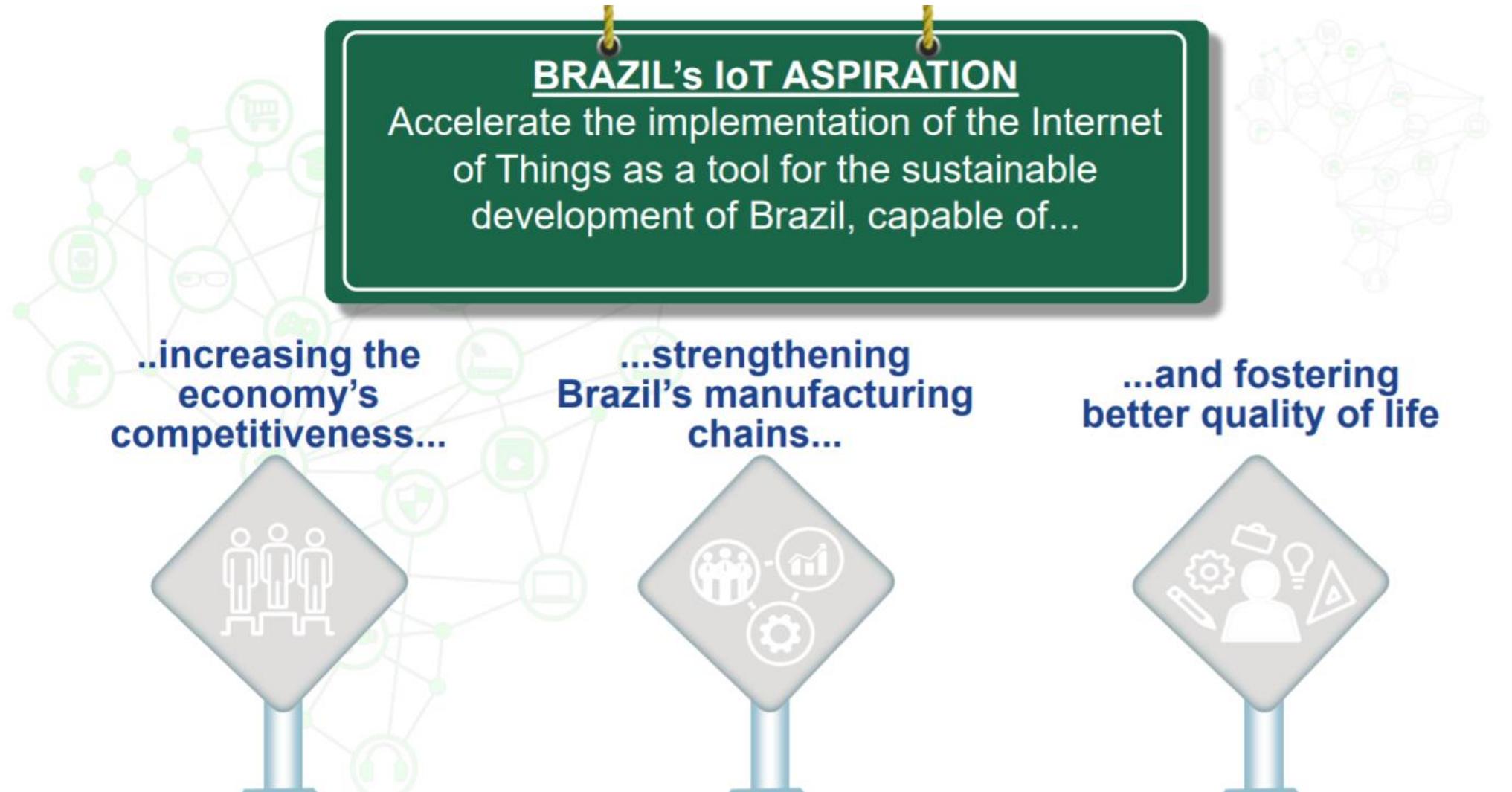
08:55 - 30 de mar de 2015

Kevin Ashton foi cofundador e diretor executivo do **Auto-ID Center**



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BRAZIL NATIONAL INTERNET OF THINGS PLAN

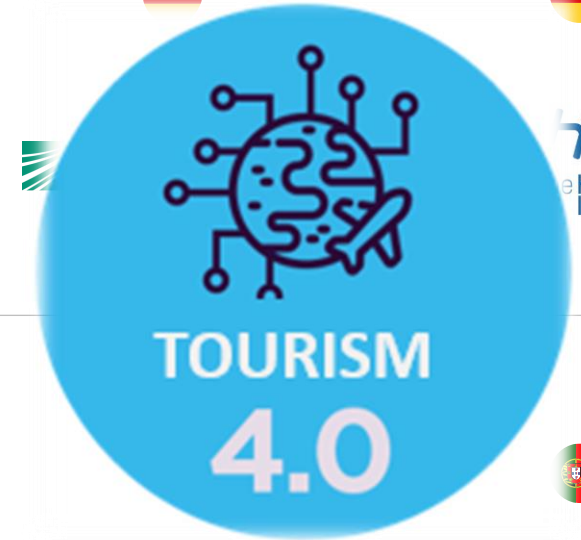


IOT PLAN PRIORITIZED AREA



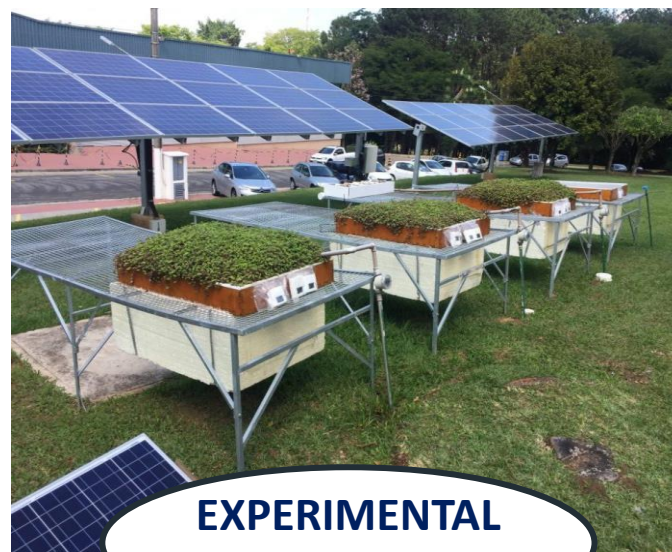
Brazil
Institutes the
National Internet
of Things Plan
and provides for
the Management
and Monitoring
Chamber for the
Development of
Communication
Systems Machine
to Machine and
Internet of
Things.

INTERNATIONAL PARTNERSHIPS





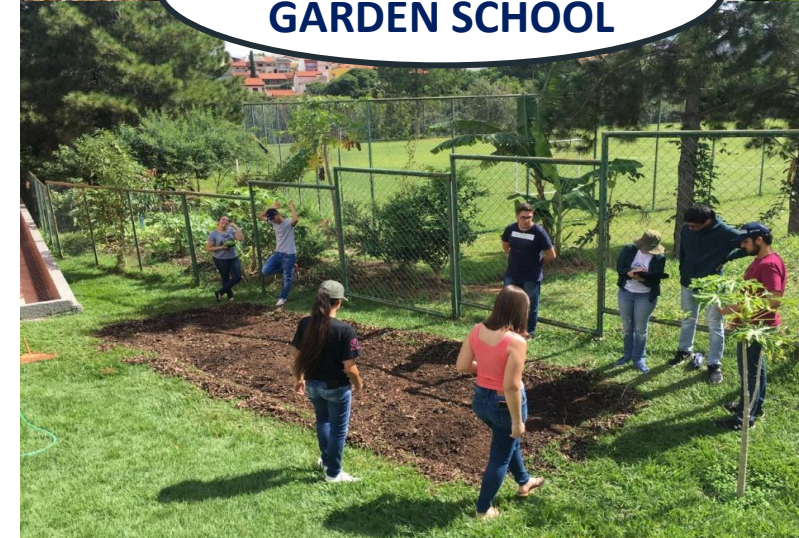
**SMART
GREENHOUSE**



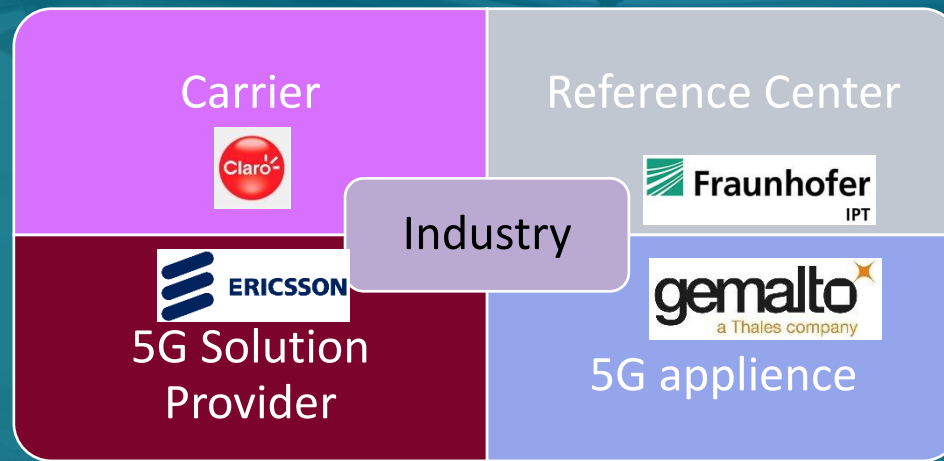
**EXPERIMENTAL
AREA**



**VEGETABLE
GARDEN SCHOOL**



IND 4.0 Facens



Certification and application of Industry 4.0



Application of resources used in "Intelligent Manufacturing"



Partnership with international companies and research institutes



Used by students and companies in training



5G Ecosystem

Partners

FESTO

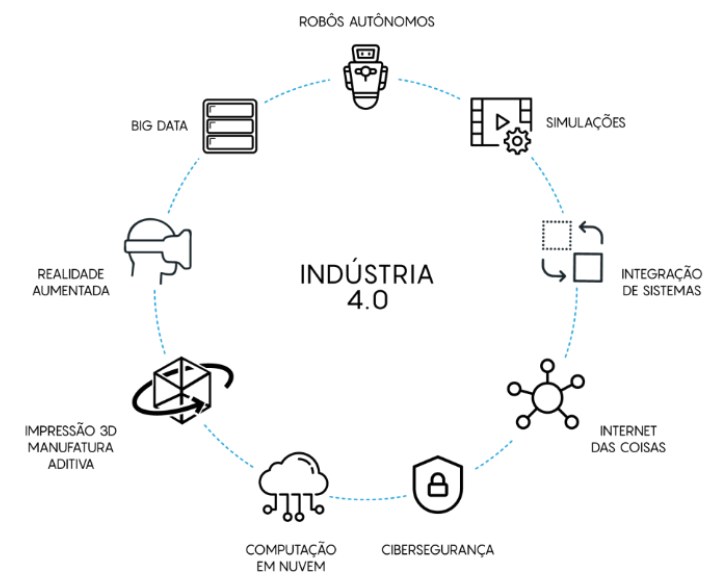
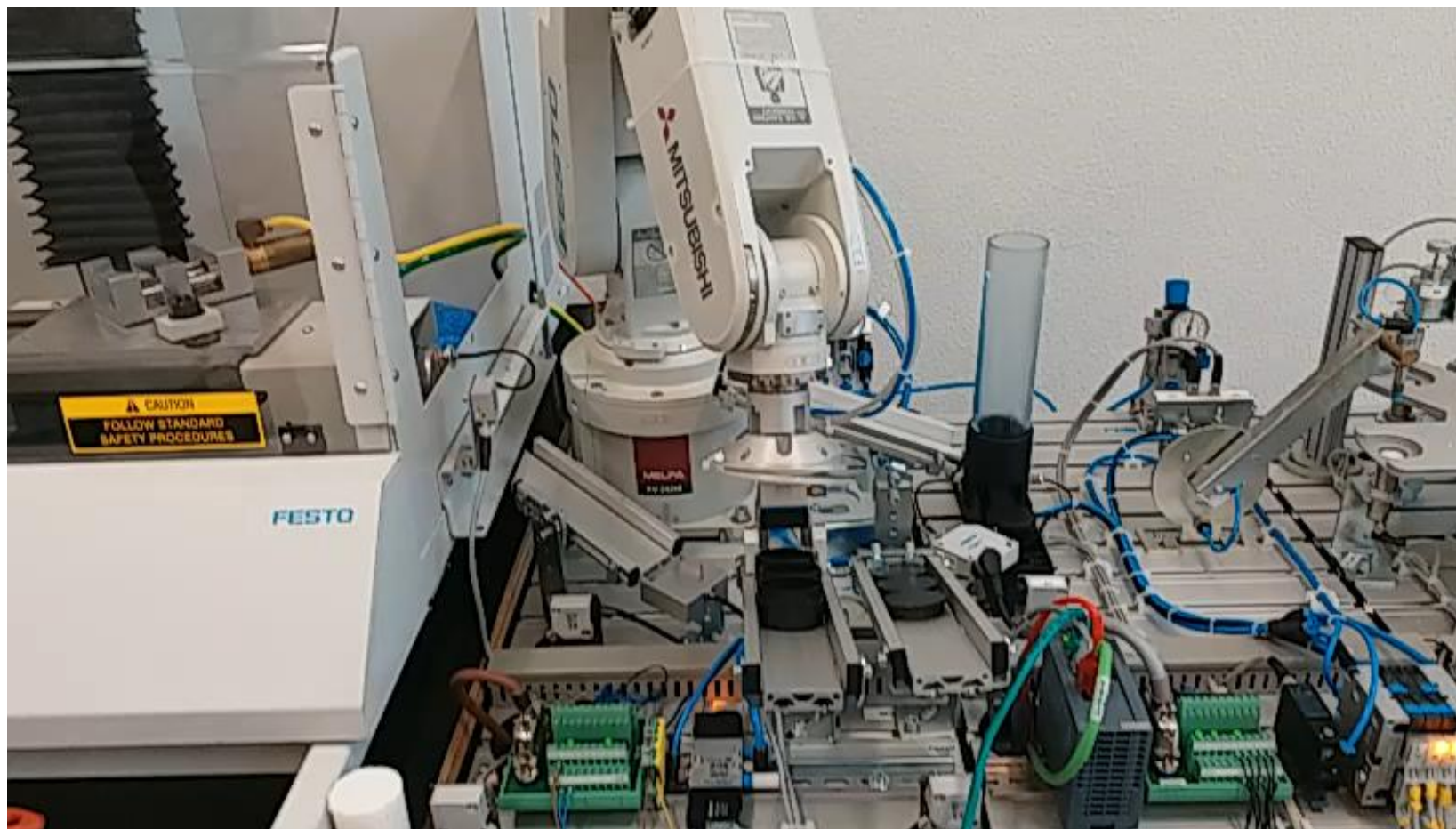

Technische Hochschule
Ingolstadt

 **Fraunhofer**

VDI

AVEVA

INDUSTRY 4.0 LAB





Brazilian Artificial Intelligence Nucleus

Submission of Projects in public notices:

AI DEVELOPMENT CENTERS/ MCTI in 4 areas:

- SMART CITIES (IARA),
- HEALTH,
- AGRO,
- INDUSTRY 4.0



APPLIED RESEARCH CENTRES IN AI

Brazil has announced its aims to establish eight applied research centres hosted by established academic and research institutions.



AUTONOMOUS e ELECTRIC CAR



Carregador InCharge - Dados Última Carga	
	INC018 Status
	Disponível
	26/04/2021 12:58:03
	Tempo em Carregamento
	268 min
	Co2 evitado (kg)
	201 kg
	Energia Fornecida (kwh)
	29,48 kwh

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SMART SECURITY



❑ Traffic control inside the Campus

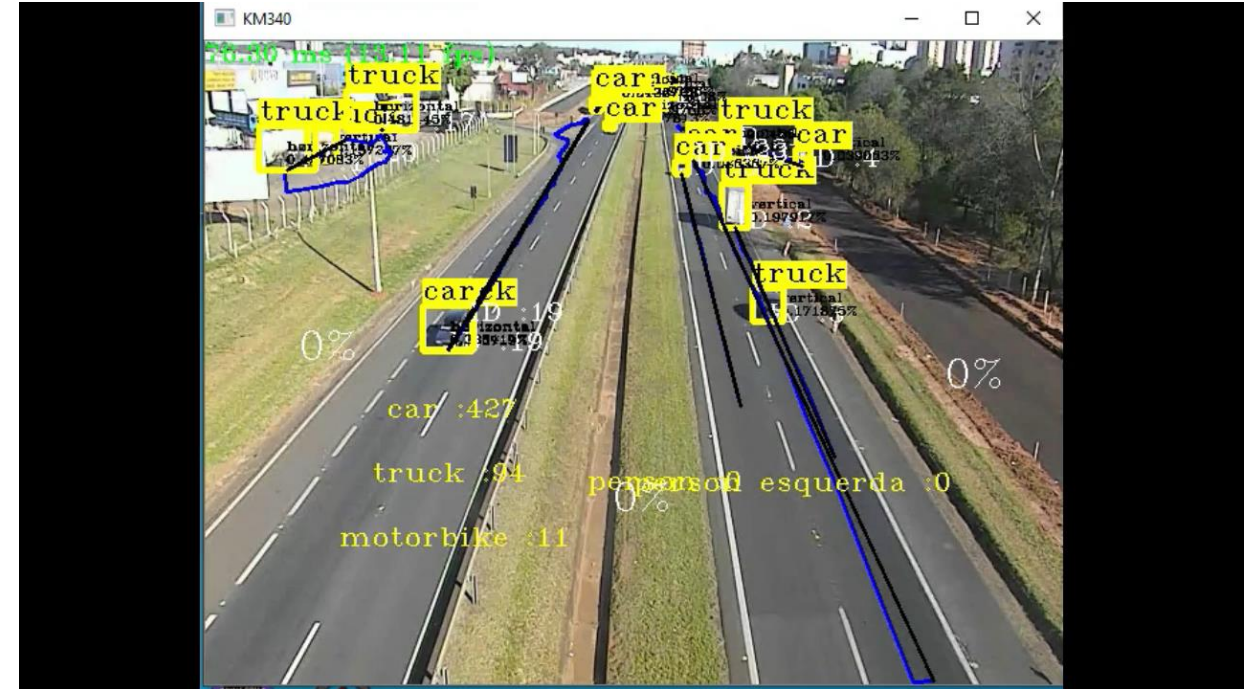
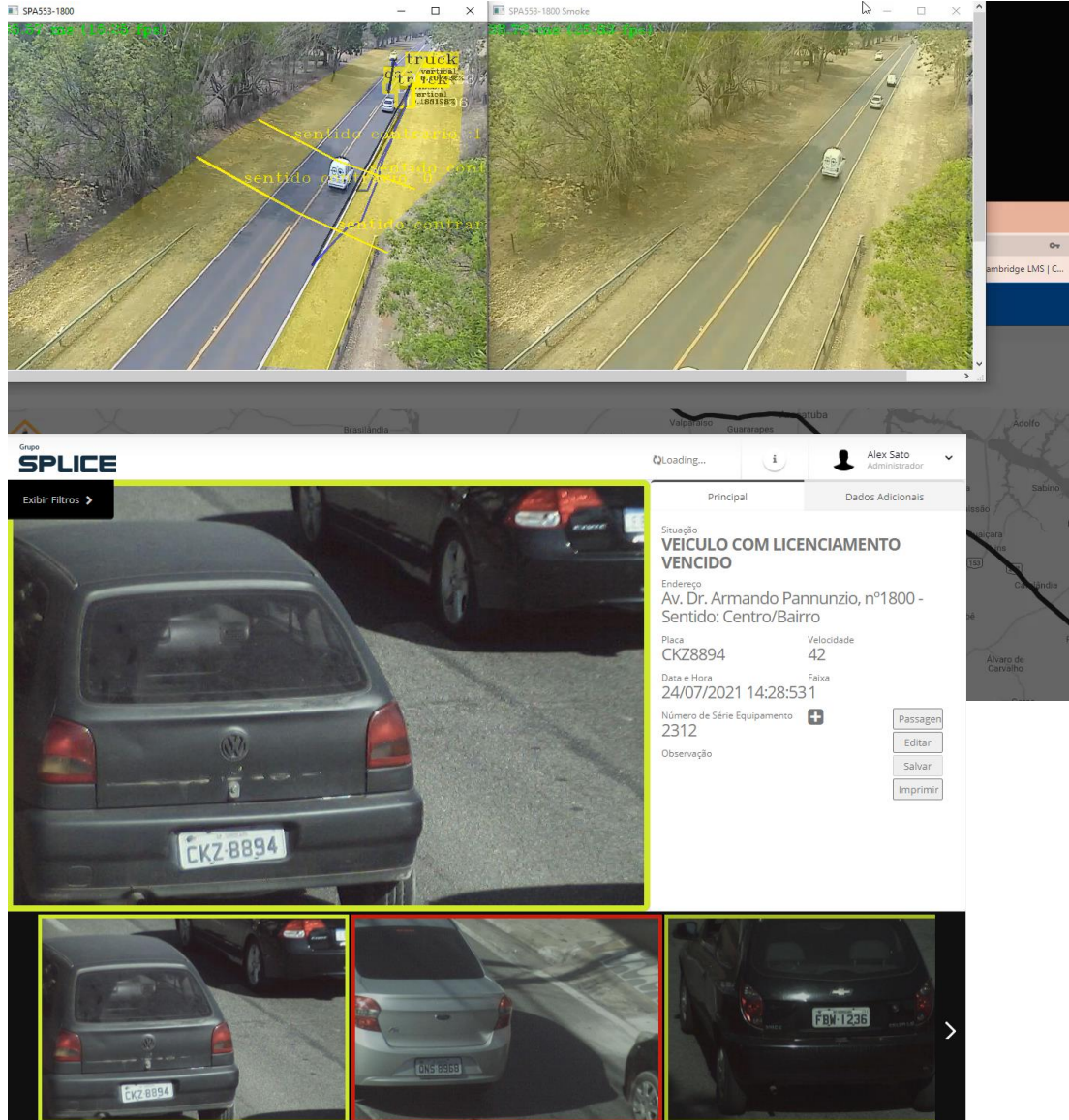
❑ Parking Control

- ❑ Monitoring and control of traffic through OCR technology
- ❑ Inspection of infractions of internal norms
- ❑ Physical and patrimonial security of the community and campus

FACENS

AVEVA

SMART CITIES / HIGHWAYS MANAGEMENT SYSTEM

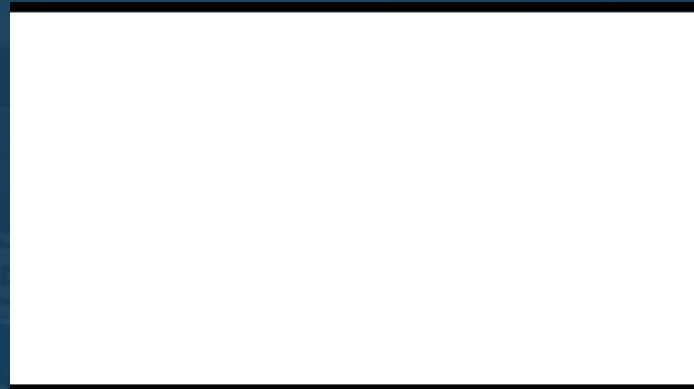


Smoke detection

Contrary Sense (against the flow)

Vehicle count

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**Development of
games and apps**



**Gamification for
training and industry**



Virtual Reality



Augmented Reality



The Fab LAB logo, which consists of a circular icon containing three stylized human figures in red, green, and blue, holding hands.

Fab LAB

The Facens logo, featuring a stylized white 'F' icon followed by the word 'Facens' in a white sans-serif font.

**1st Fab Lab in the
Brazilian Country
cities**



**Laboratory of Digital
Manufacturing**

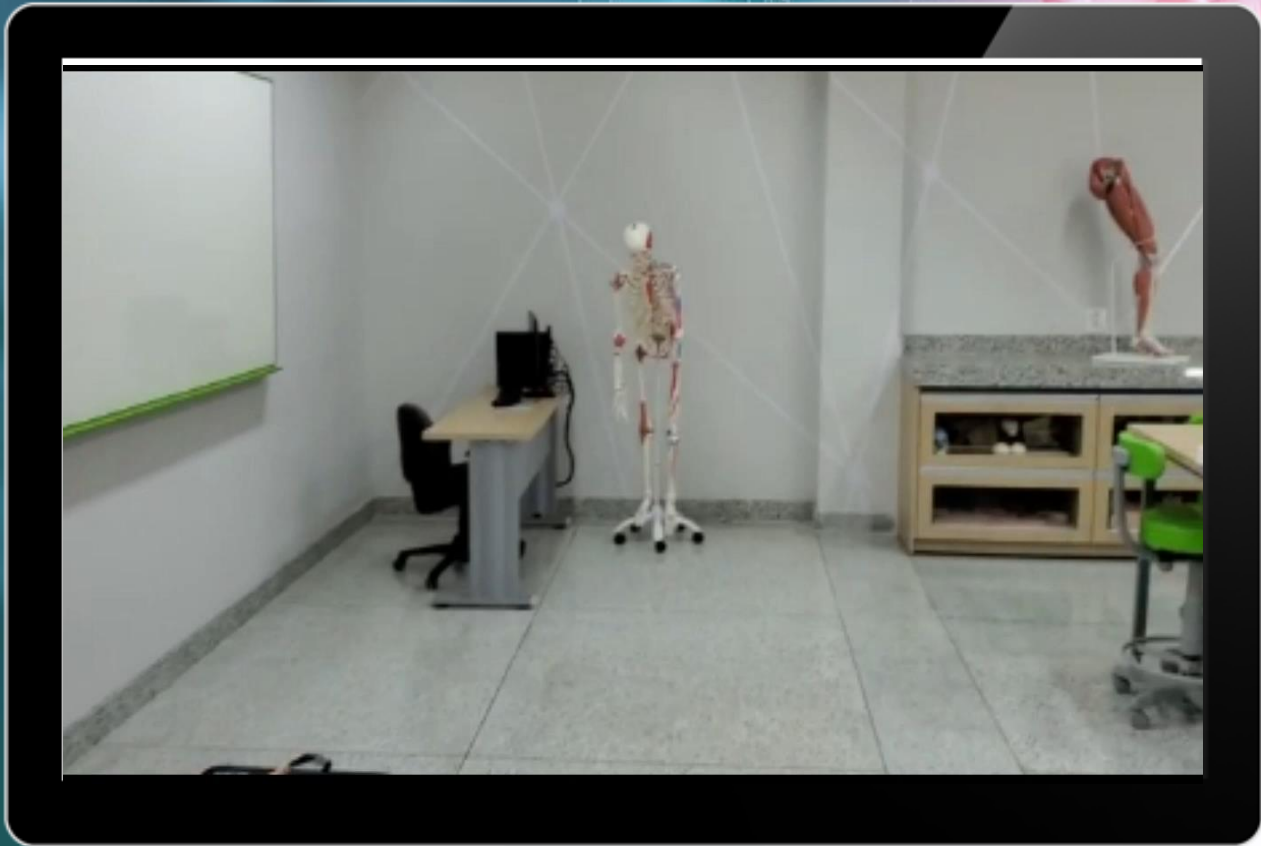


**Prototyping of ideas
with a view to
innovation and
invention**

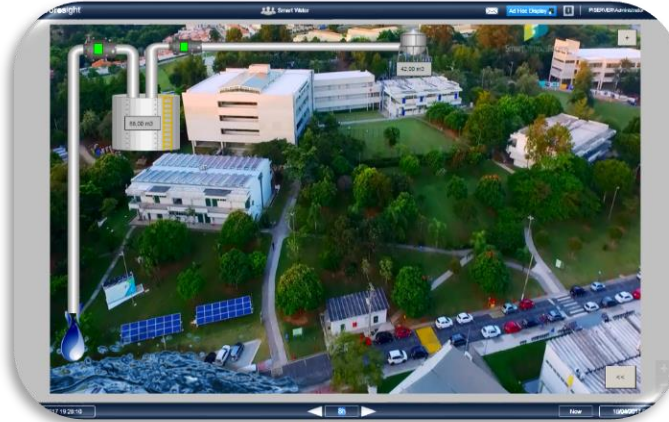


**3D printer, laser
cutting and other
equipment**





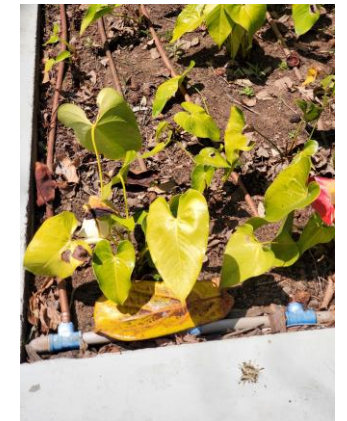
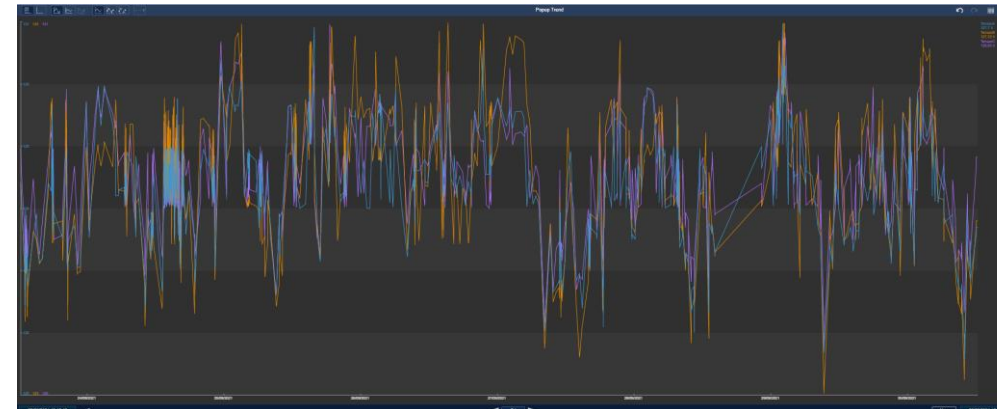
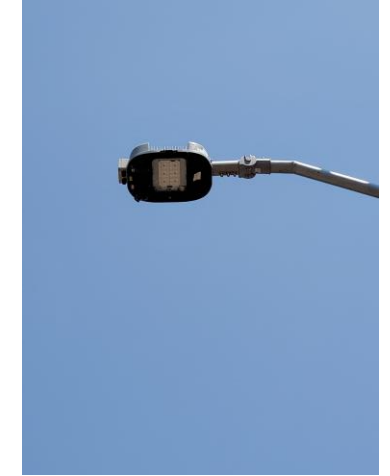
MORE THAN 300 PROJECTS



Urbanization



MORE THAN 40 KIND OF IOT SENSOR CONNECTED TO PI VISION



MORE THAN 40 KIND OF IOT SENSOR CONNECTED TO PI VISION



PI System:

- ☐ PI Asset Framework
- ☐ PI Vision
- ☐ PI DataLink
- ☐ PI DataArchive
- ☐ PI Interface Configuration Utility
- ☐ PI Builder

ABB

BEQ

CPFL
ENERGIA

FCA
FIAT CHRYSLER AUTOMOTIVE

Instituto
Ayrton
Senna



p
CORP
W

AVEVA
OSIsoft.



beOn
Claro

Embratel

ERICSSON

OSIsoft.



PARQUE TECNOLÓGICO DE SOROCABA
Alexandre Bello Netto

LLANTIS

5G

SMART CAMPUS
FACENS

AGORA, SOROCABA TEM
O MAIOR CAMPUS 5G
CONECTADO DE SÃO PAULO.

Saiba mais

Facens

Claro

beOn
Claro

Embratel

ERICSSON



Centro de Referência
IoT e Tecnologias 4.0
Facens | MCTI

O Conselho Federal
de Educação
está em ação!



IND
Facens

ICE
ens



+2.400 Students impacted

+340 Projects realized

+300 Citations for
contribution to SDG
through project work

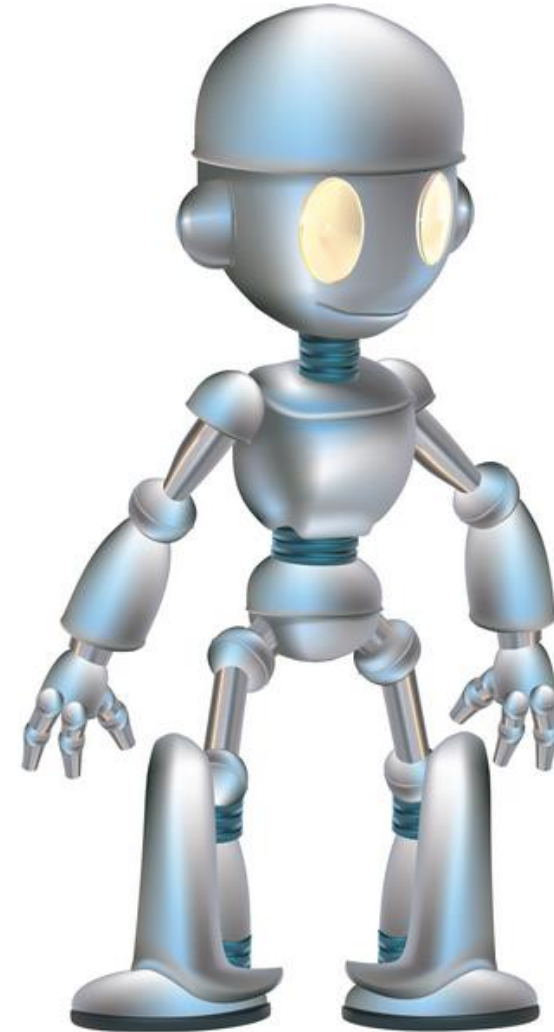
+40 IoT devices integrated on
the Dashboard

Awards



LESSONS LEARNED

- ❑ Businesses do not make decisions, PEOPLE DO
- ❑ Businesses do not sell products, PEOPLE DO
- ❑ Business do not create relationships, PEOPLE DO



Fonte: <http://www.48days.com/2011/12/06/money-but/>

LESSONS LEARNED



*“Sugar is made of three molecules:
oxygen, hydrogen, and carbon.*

*Where is the sweetness?
In the relationship!”*

Author unknown

**Technology is a mean
and not end**

SUMMARIZING

- ☐ It should be transparent
- ☐ Flexible
- ☐ Collaborative
- ☐ Multigeneracional
- ☐ Must be magic
- ☐ Inclusive
- ☐ Should be fun!



☐ **And help to save and improve human experience!**

Be Safe and Resilient!

AVEVA





Head Smart Campus Facens Head Innovation VIP-Systems

+55 11 99973 2803

 [linkedin.com/company/aveva](https://www.linkedin.com/company/aveva)

 [@avevagroup](https://twitter.com/avevagroup)

ABOUT AVEVA

AVEVA, a global leader in industrial software, drives digital transformation for industrial organizations managing complex operational processes. Through Performance Intelligence, AVEVA connects the power of information and artificial intelligence (AI) with human insight, to enable faster and more precise decision making, helping industries to boost operational delivery and sustainability. Our cloud-enabled data platform, combined with software that spans design, engineering and operations, asset performance, monitoring and control solutions delivers proven business value and outcomes to over 20,000 customers worldwide, supported by the largest industrial software ecosystem, including 5,500 partners and 5,700 certified developers. AVEVA is headquartered in Cambridge, UK, with over 6,000 employees at 90 locations in more than 40 countries. For more details visit: www.aveva.com