METRON

# ARTIFICIAL INTELLIGENCE & ITS POTENTIAL FOR SUSTAINABLE ECONOMIC GROWTH

Training module for the International Energy Agency

By Vincent Sciandra, CEO of METRON

# ENVIRONMENT & DEVELOPMENT CHALLENGE

## AI AS A SOLUTION TO DECARBONIZE A GROWING ECONOMY

### CHALLENGES

Right to development

Climate action

- Aligning **economic growth** with **sustainable development** = one of the greatest challenges of the century
- The two are **not mutually exclusive**

### THE WAY FORWARD

Artificial Intelligence

Digitalisation

- Opportunity to **optimize energy systems** and help decarbonize the economy
- Optimized energy systems to help industrials and countries achieving environmental and **climate engagements** while retaining **output production and competitiveness**

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# OUR MISSION & SOLUTION

## ENERGY INTELLIGENCE FOR STRONG AND SUSTAINABLE DEVELOPMENT

We create

**ENERGY OPTIMIZED INDUSTRIES**

where:

- Energy consumption is fully optimised
- Facilities are **reducing carbon footprint**
- Managers are empowered by AI
- Sustainable equals to competitive

We do so by providing a

**PLATFORM SOLUTION**

which:

uses **Artificial Intelligence** to bring industrials

up to
**15%**
of energy savings

measurably
**greener**
production

payback in less than
**12 months**
for any factory

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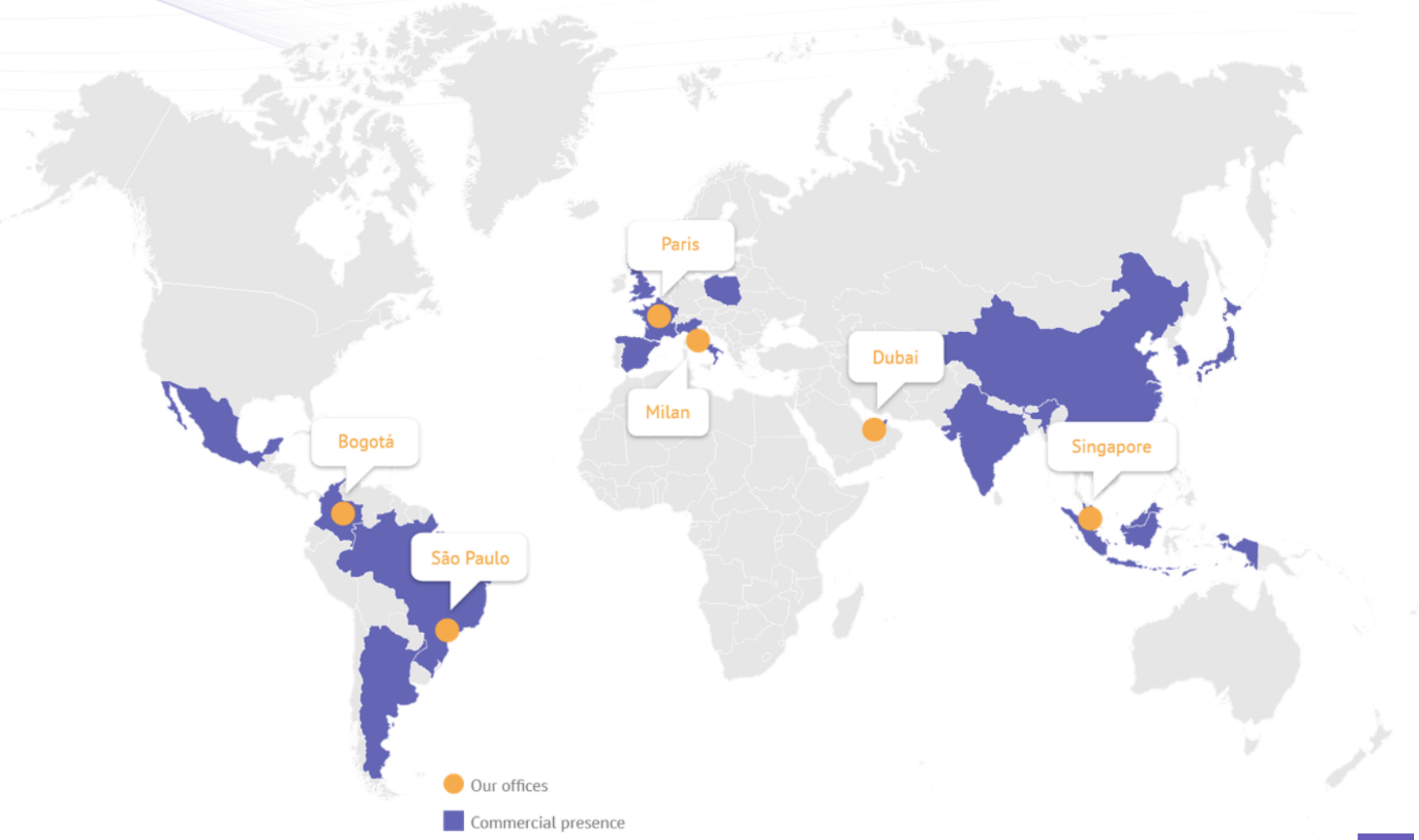
# GLOBAL POTENTIAL OF ENERGY INTELLIGENCE

## AI SOLUTION WHICH WORKS IN ANY FACTORY

**100 +** clients

**100%** satisfaction

- **Industry-agnostic** approach
- Regardless digitalisation level
- Successful projects in numerous developing countries
- **No impact** on the **quality or quantity** of the production

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# SUCCESS STORY: PAPER PLANT IN COLOMBIA

## INNOVATIONS & TOTAL SAVINGS

### BEFORE

- Macroscopic monitoring of energy consumption
- No visibility on the production parameters influence on energy consumption
- Isolated and manual tests to find the best practices in chemical retention

| Optimisations | Savings /year |
|---|---|
| **Paper Machine Drying** | 190 000 $* |
| **Pulp process** | 50 000 $ |
| **Coating project** | 10 000 $ |
| **TOTAL SAVINGS ACHIEVED** | **250 000 $** |
| Potential additional savings | 180 000 $ |

### AFTER

- Digital energy management
- Paper Machine energy consumption model with production context
- Real-time alarms
- Optimization of chemicals without production deterioration

*Validated by the accounting service of the client

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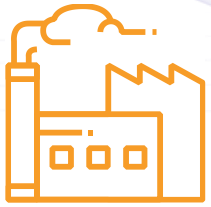
# SUCCESS STORY: PAPER PLANT IN COLOMBIA

## SOCIAL AND ENVIRONMENTAL BENEFITS

More **climate friendly** production

**25 000 tons of CO2 saved every year**



**R eduction of** the use of **chemicals**

**22% less of chemical agents needed**

**A utomatic reporting** of paper machine performance

**1 day-man time saved / week**

**E nergy efficiency culture** spread among the paper machine operators

**Energy usage awareness**

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# ...AND WHAT IF?

## AI IN COLOMBIA FOR SUSTAINABLE GROWTH

### COLOMBIA NOW

- 275 million tonnes of CO2 every year
- National Determined Contribution (INDC) according to the **UN Convention on Climate Change** for 2030 = achieve **20% less CO2 emissions yearly**
- Industry needs to save at least 3,4 million tonnes CO2 yearly

### COLOMBIA WITH AI-OPTIMISED INDUSTRY

- INDC for Industry achieved if approximately **136 of its largest factories** have their **main process AI-optimized**
- Significant **contribution to Colombia's climate goals**
- More **competitive industries** thanks to cost savings
- New funds for innovation and sustainable expansion

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Get in touch for more information

edita.bezegova@metronlab.com

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