



**22ND GCCA EUROPEAN
COLD CHAIN CONFERENCE**
20-22 MARCH 2019 | BRUSSELS

Artificial Intelligence – A Myth, or Reality in
Temperature-Controlled Logistics ?

Kevin Françoisse, CEO, Sagacify

Presented by



**GLOBAL COLD CHAIN
ALLIANCE®**



“

AI is the new electricity
It is changing our society



INVESTIGACIÓN

Ford

SELF-DRIVING
TEST VEHICLE

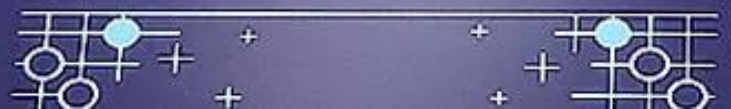
2450+
Miles



GoMing
Met

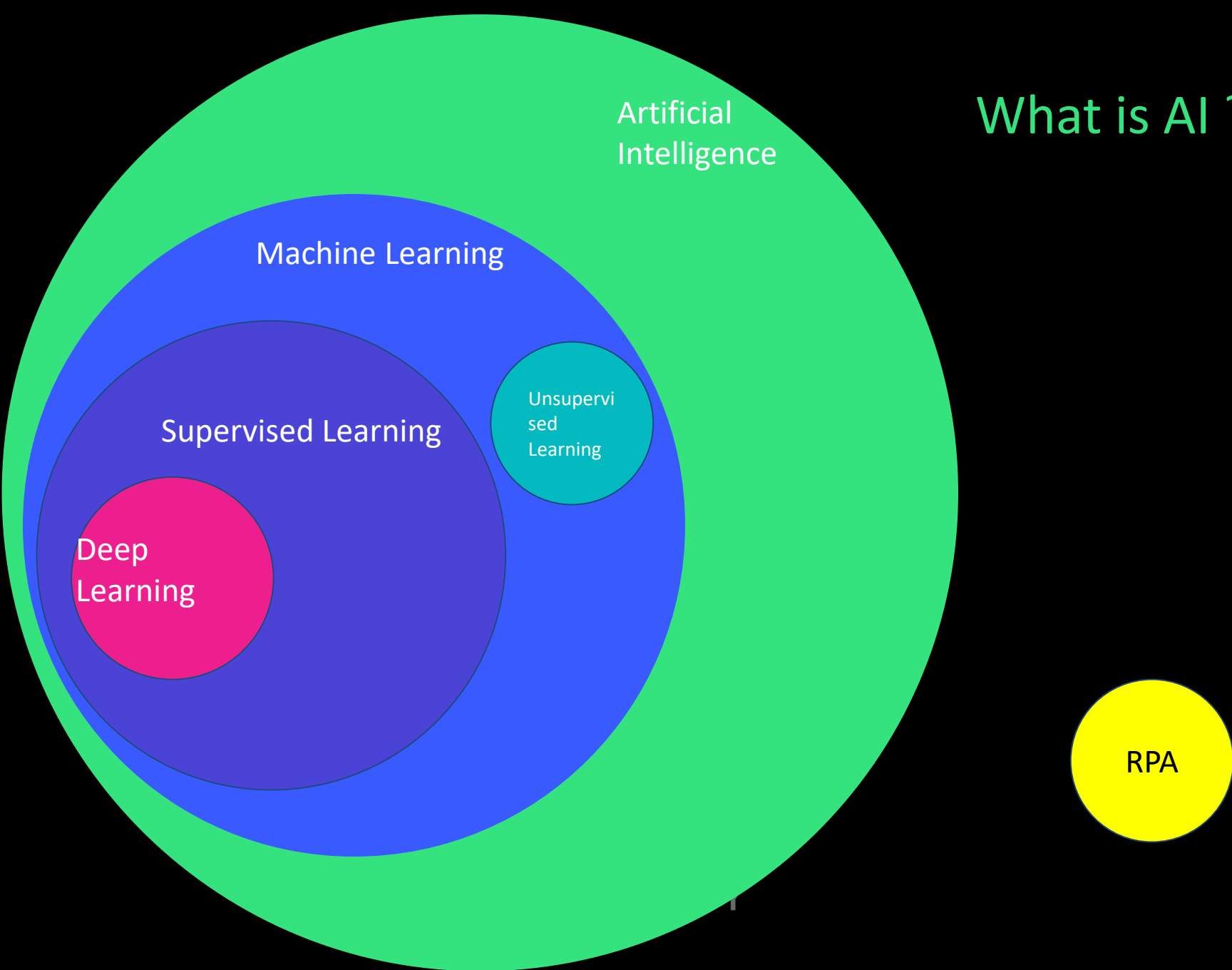
AlphaGo

Lee Sedol





What is AI ?



Can you write a computer program that does that ?



“apple”



“orange”



“banana”



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```
if color == "green":  
    return "apple"  
elif color == "  
    return "or  
else return "
```



“apple”

“orange”

“banana”

“apple”



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```
if shape == "round":  
    if color == "green"  
        return "apple"  
    else color == "orange"  
        return "orange"  
else return "banana"
```

"apple"

"orange"

"banana"

"banana"



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```
if shape == "round":  
    if color == "orange":  
        return "orange"  
    elif color == "yellow":  
        return "banana"  
else return "apple"
```



“apple”

“orange”

“banana”

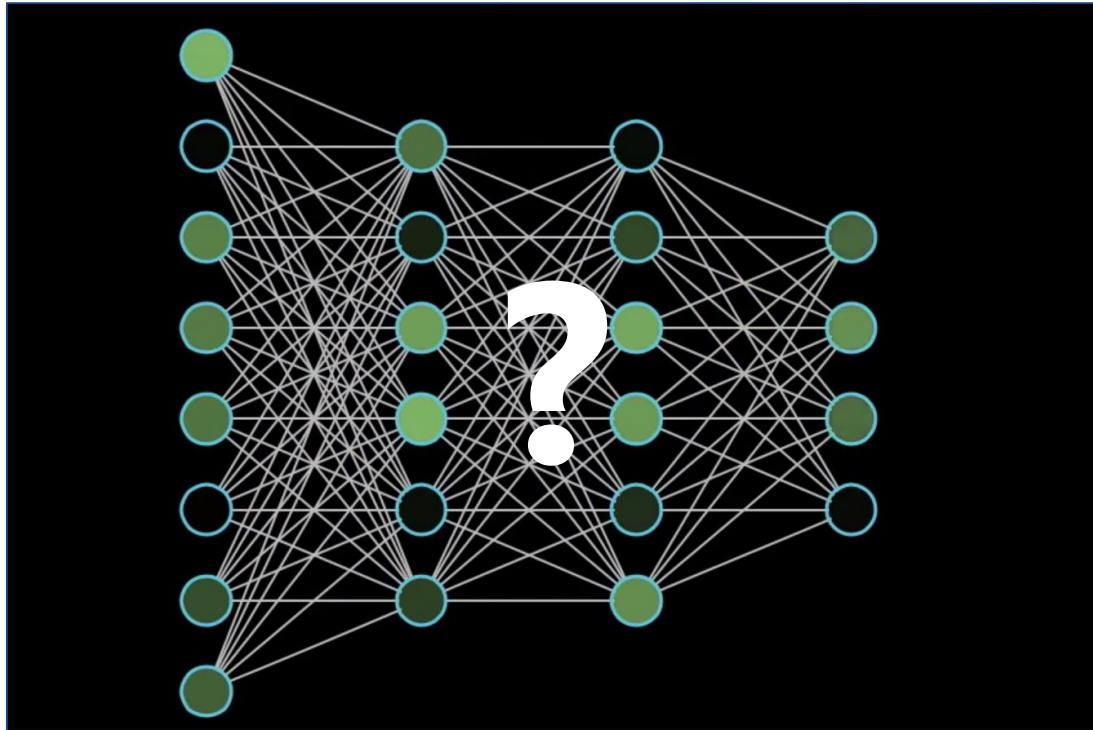
“banana”



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“apple”

“orange”

“banana”

“apple”



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What can AI do or cannot do ?



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Input (A)

Output (B)

Applications

email



Intent
detection

Text Classification

audio



Text
transcript

Speech Recognition

Sensors
Data



Number

Prediction



Object
Detection



Object verification or
Identification



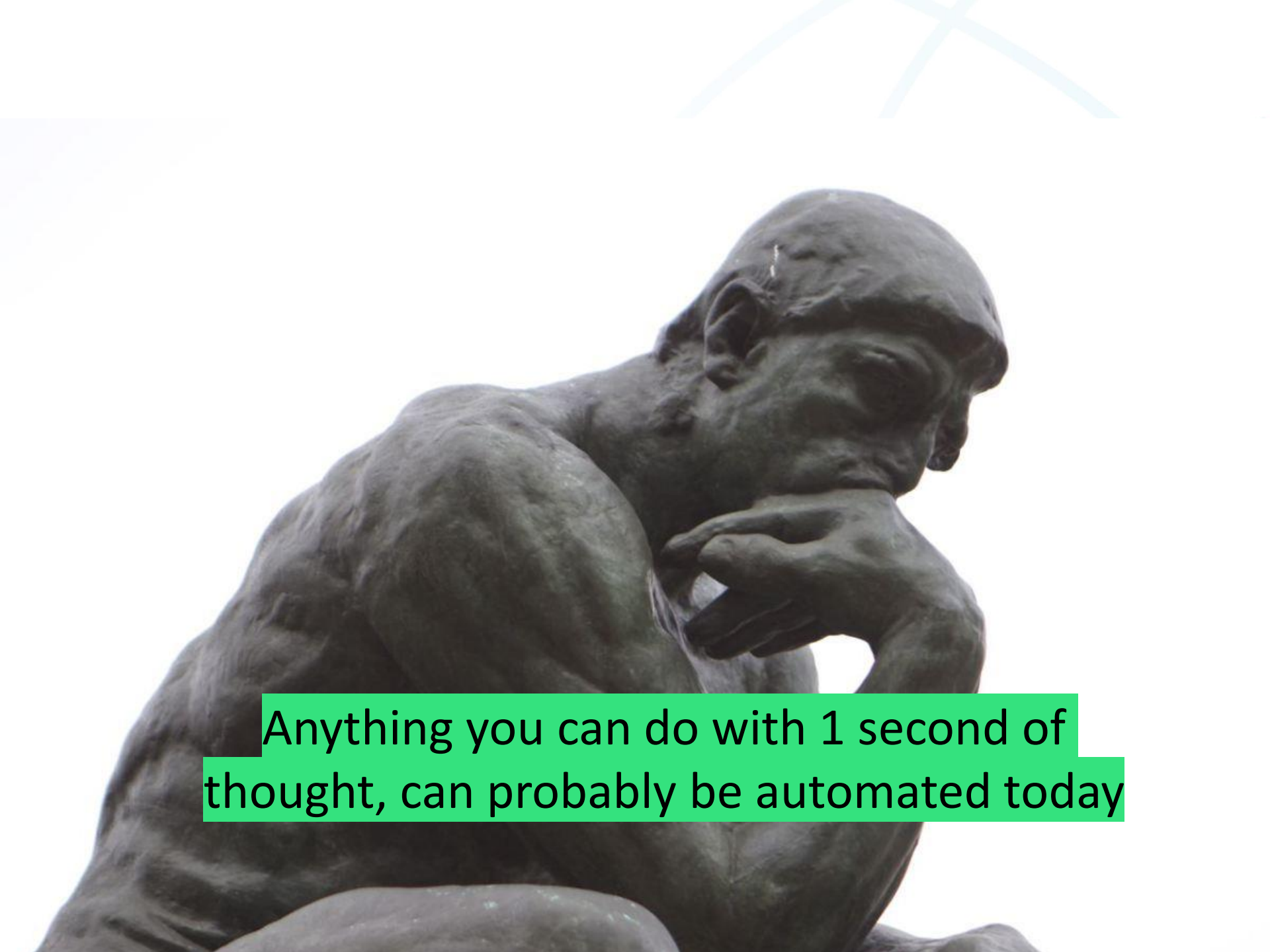
Anomaly
Detection



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Anything you can do with 1 second of thought, can probably be automated today



Think about automating tasks rather than automating jobs!

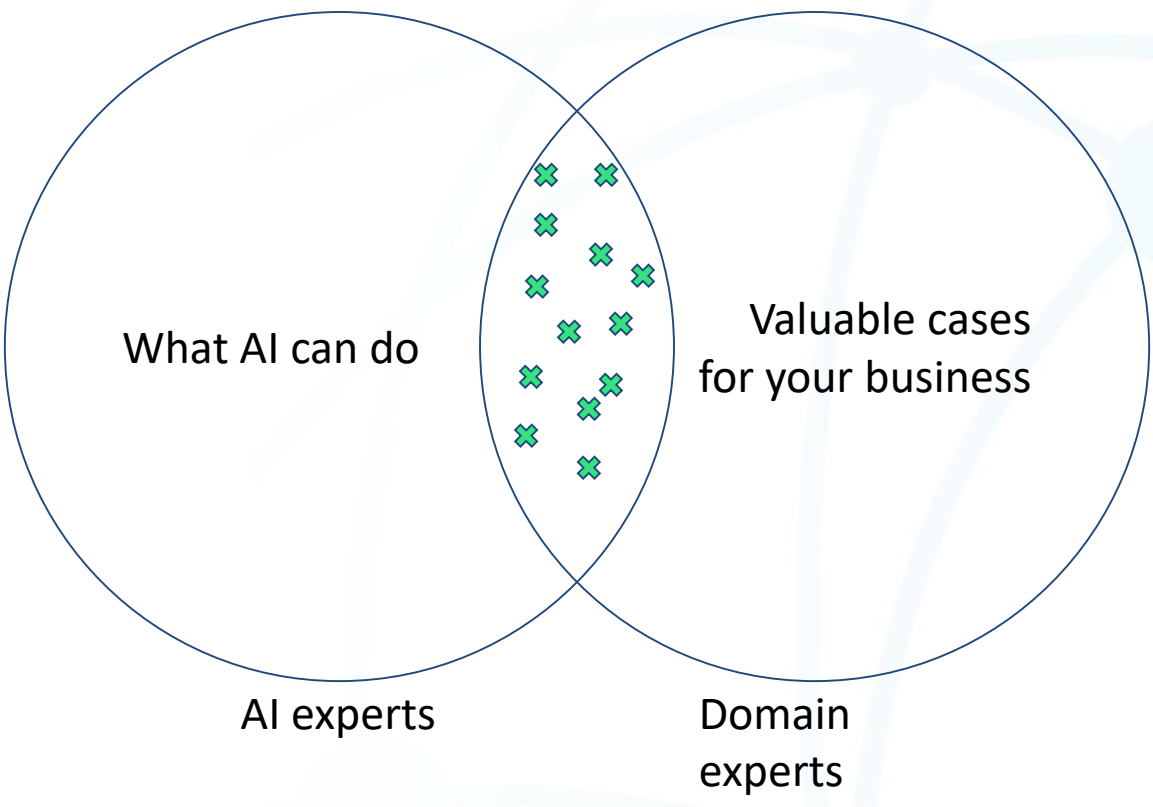


the most time consuming ones



Tasks that no longer required human level cognition

Cross-functional team



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Brainstorming Framework

- Think about automating tasks rather than jobs!
- What are the main drivers of business value?
- What are the main pain points in your business ?
- How much data is needed ? Is my data clean ?
Are we mature in terms of data ?



Potential AI application for the Cold Chain Logistic industry



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Object Detection

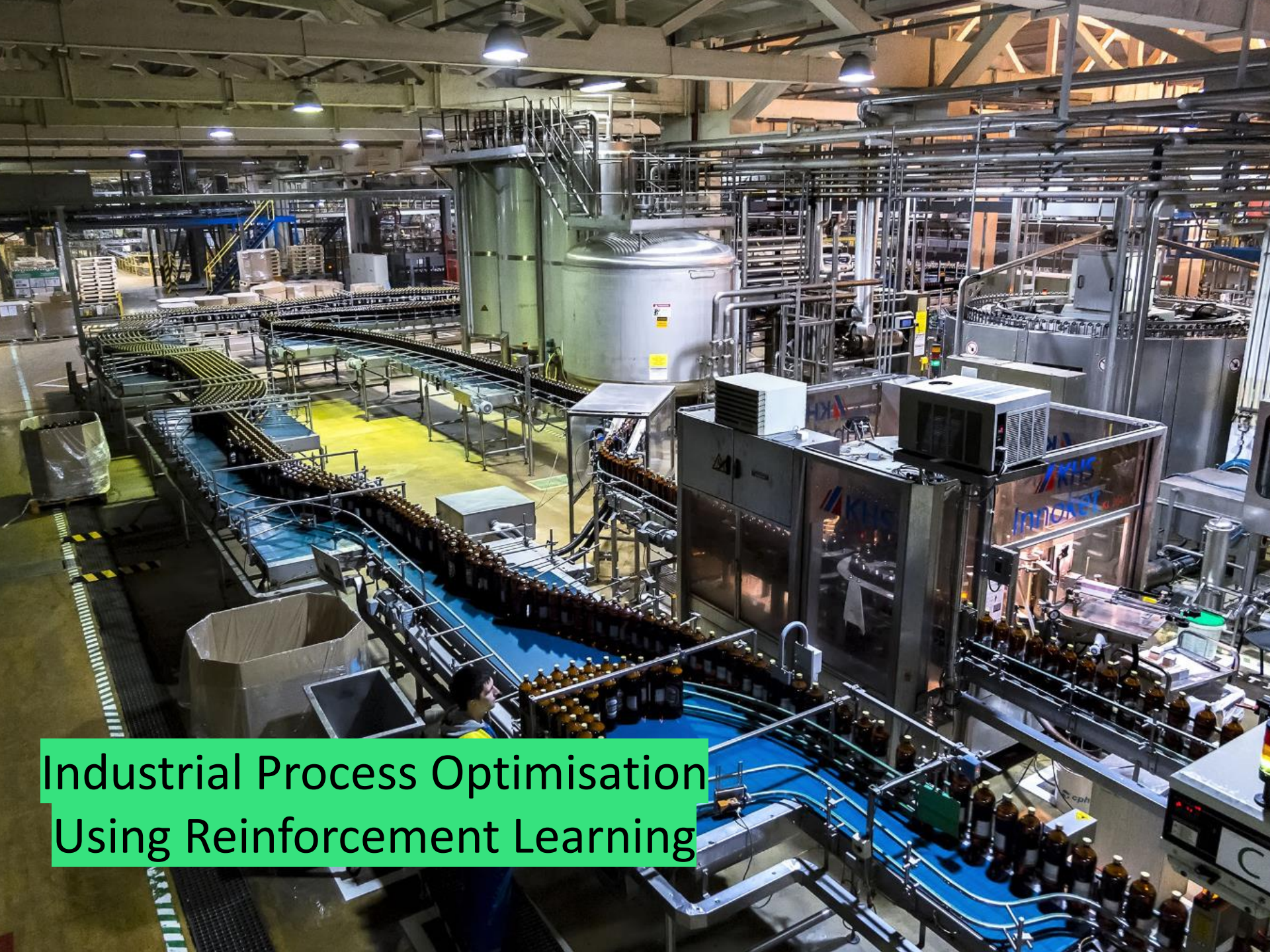


Heineken

93.2%

Visual Inspection Quality Control



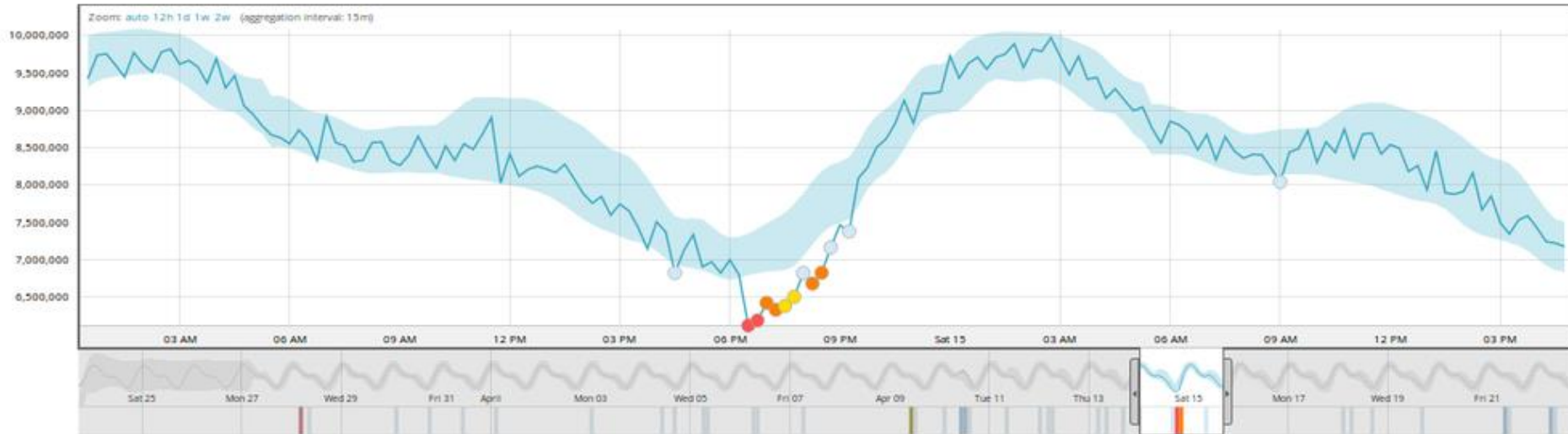


Industrial Process Optimisation
Using Reinforcement Learning

Anomaly Detection from Sensor data

Detector: 

Single time series analysis of sum total



Anomalies

Severity threshold:

Interval:

time	max severity	detector	actual	typical	description	job ID
April 14th 2017, 18:00	96	non_null_sum(total)	6121070	7074770	↓ 1.2x lower	total_requests
April 14th 2017, 19:00	65	non_null_sum(total)	6331620	7200080	↓ 1.1x lower	total_requests
April 14th 2017, 20:00	52	non_null_sum(total)	6681540	7702430	↓ 1.2x lower	total_requests
April 14th 2017, 21:00	< 1	non_null_sum(total)	7377020	8029500	↓ 1.1x lower	total_requests
April 15th 2017, 09:00	< 1	non_null_sum(total)	8040300	8446230	↓ 1.1x lower	total_requests
April 14th 2017, 16:00	< 1	non_null_sum(total)	6824380	7210790	↓ 1.1x lower	total_requests



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Container Optimisation



Predictive Maintenance



Temp Min	15,56 C	Date	XXXX-XXXX	Customer	World
Temp Max	33,94 C	Time	XX:XX	Status	Worki
Temp Ambient	32,13 C	Job	WW25D76	Scale	MAX

Invoice

Financial Fraud Detection

Customer ID: 00567
Invoice Number: 00123
Reference Number: 007
Date: Jan 15, 2015

PAID

Unit Price	Quantity	Line Total
230.00	1	\$230.00
320.00	1	\$320.00

Possibilities are endless

Let us help you predict your next success

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kevin@sagacify.co
m



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