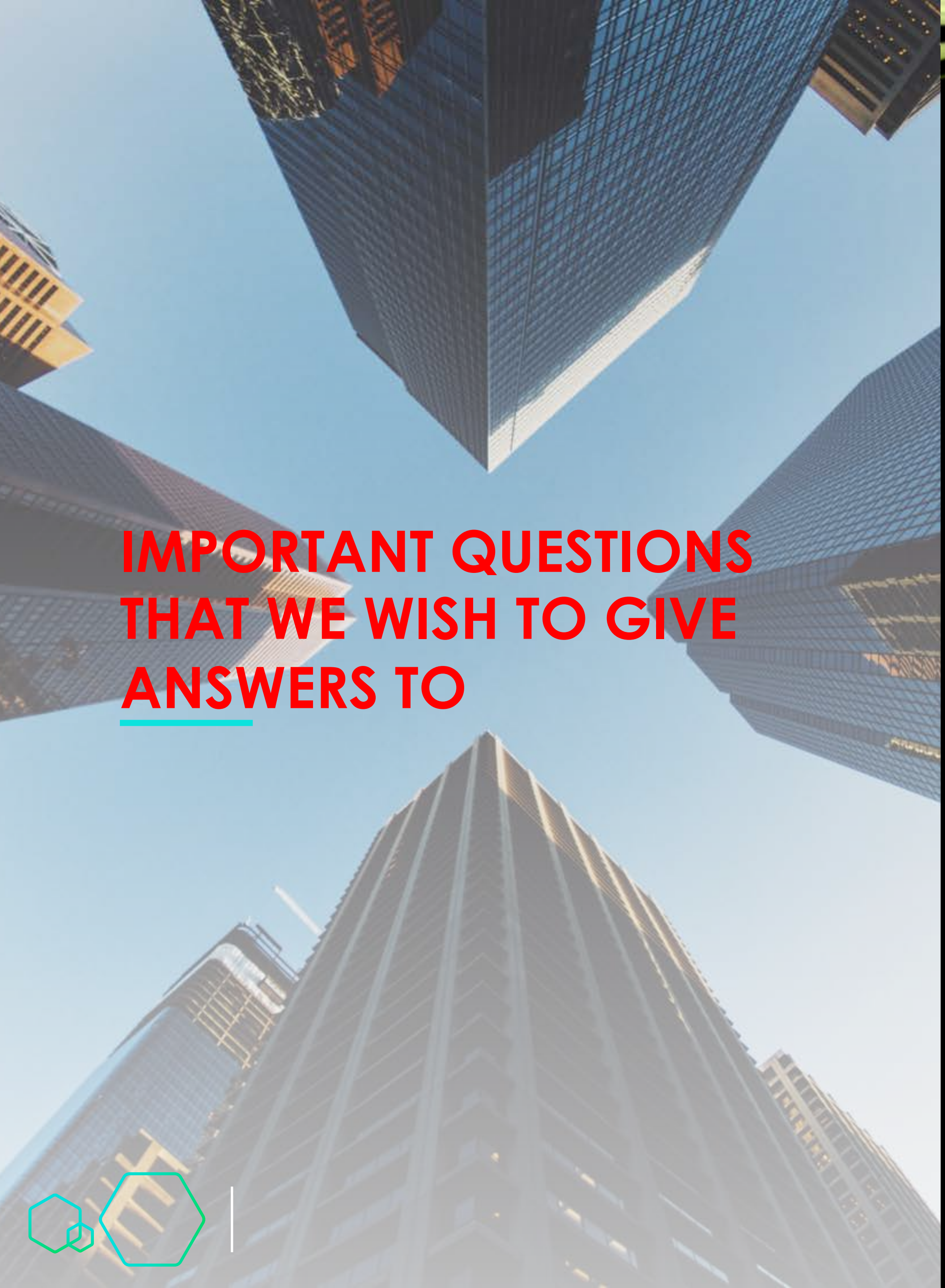
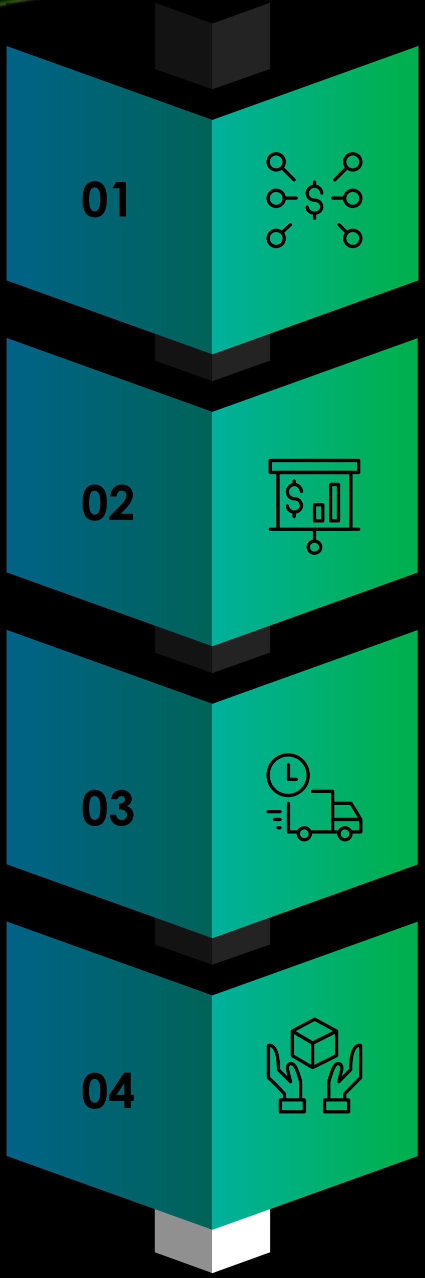
• COSCO AUTOMATIONS



IMPORTANT QUESTIONS THAT WE WISH TO GIVE ANSWERS TO



WHAT CAN WE BUILT?

WHAT WILL WE GAIN?

WHERE WE CAN GET?

HOW TO GET THERE?

- At first we decided to start with a Passive Approach in Automations because of what we call:

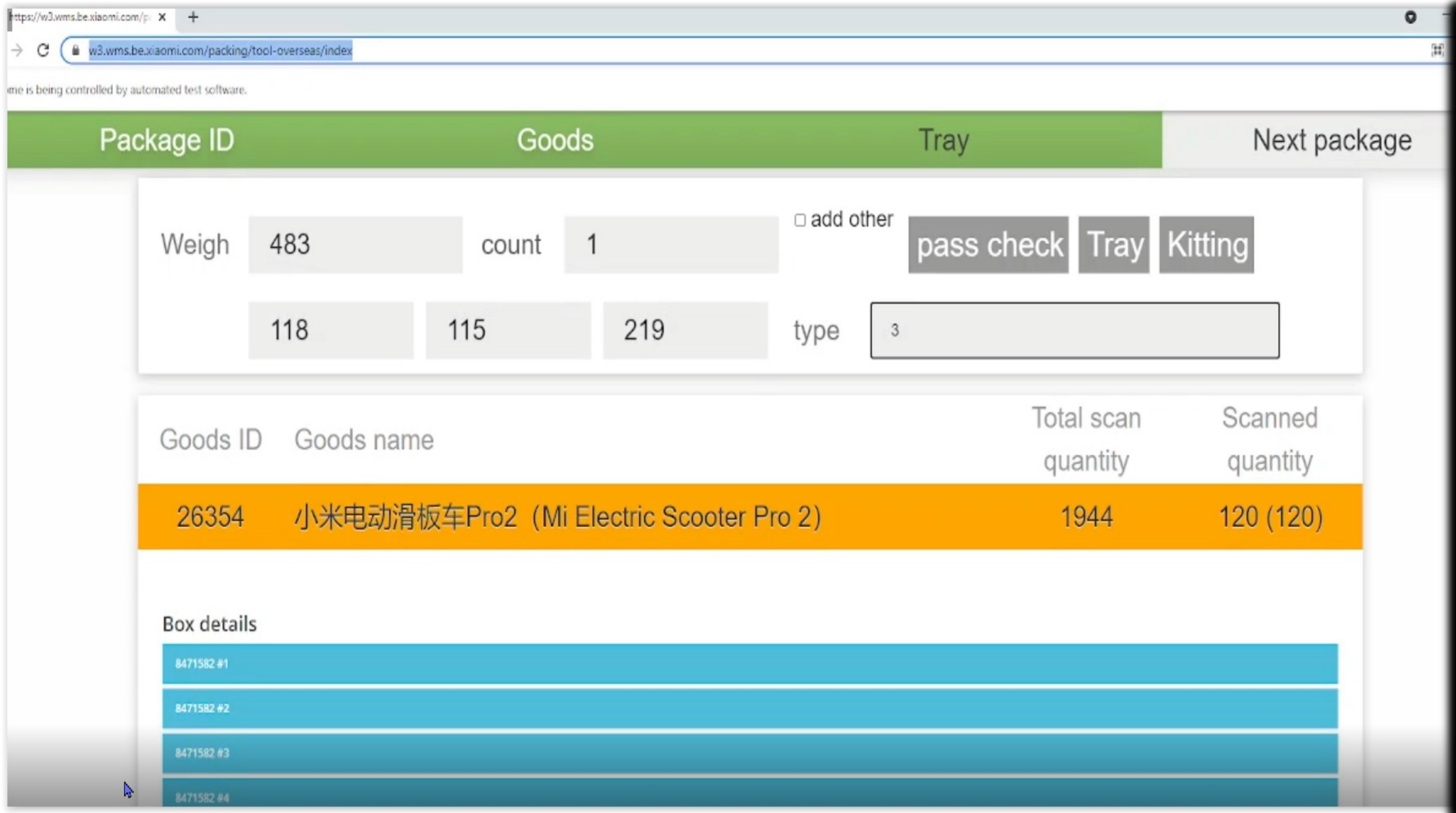
RESISTANT TO CHANGE

Which is like staying with Word and making calculations when there is Excel.

OR even better

Like staying with Excel when you can use any business intelligence software like

- Alteryx
- Tableaux
- Microsoft Power BI



https://w3.wms.be.xiaomi.com/p

w3.wms.be.xiaomi.com/packing/tool-overseas/index

me is being controlled by automated test software.

Package ID | Goods | Tray | Next package

Weigh 483 count 1 □ add other

pass check | Tray | Kitting

118 | 115 | 219 | type 3

Goods ID	Goods name	Total scan quantity	Scanned quantity
26354	小米电动滑板车Pro2（Mi Electric Scooter Pro 2)	1944	120 (120)

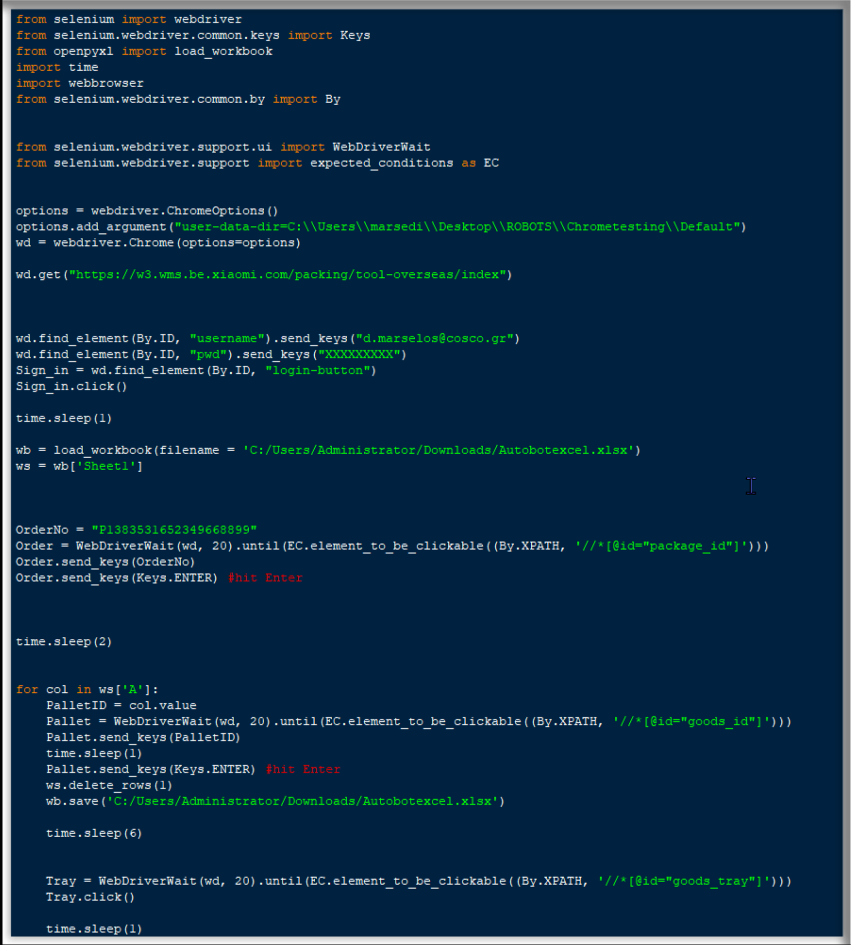
Box details

8471582 #1

8471582 #2

8471582 #3

8471582 #4



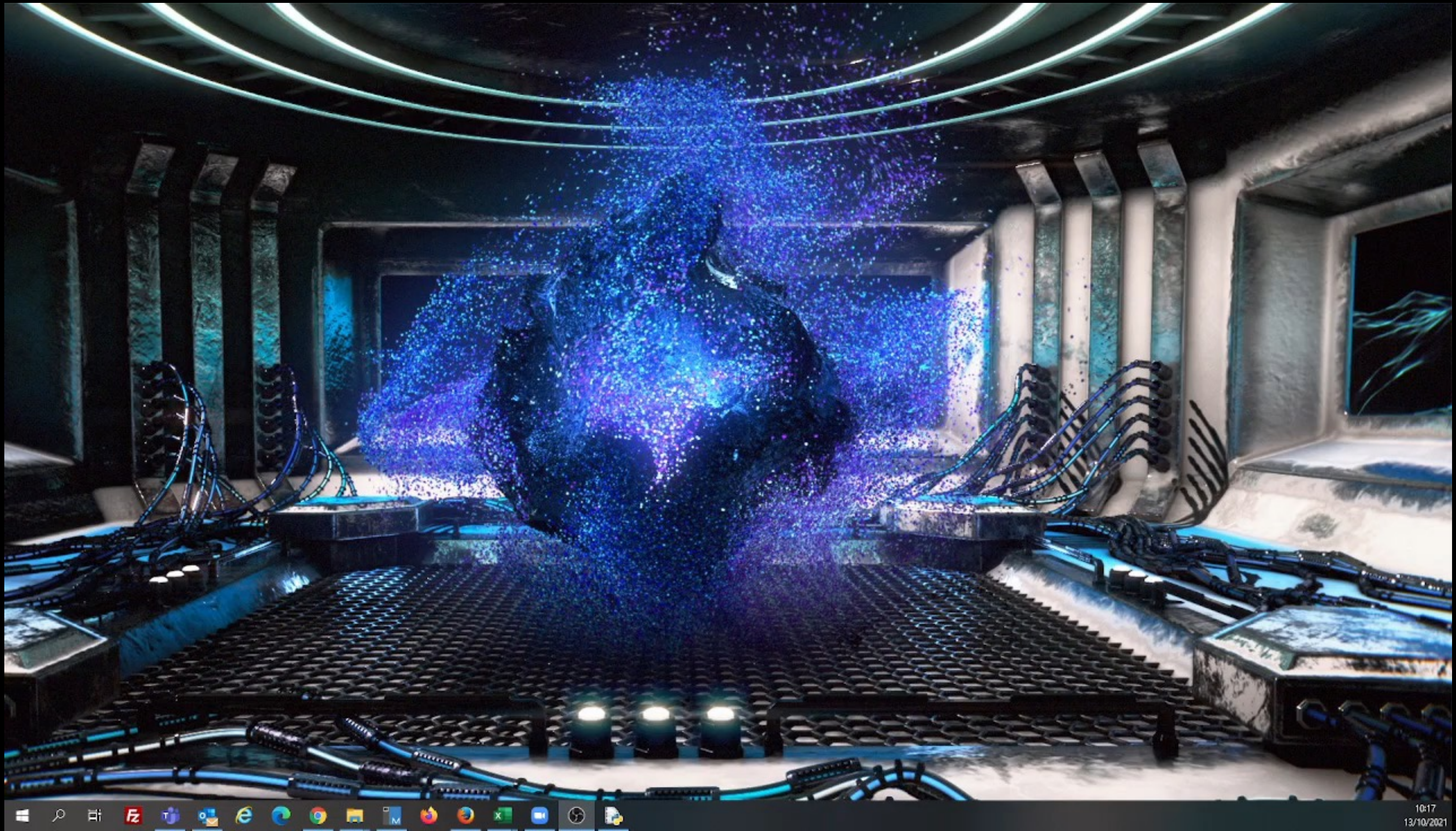
```python
from selenium import webdriver
from selenium.webdriver.common.keys import Keys
from openpyxl import load_workbook
import time
import webbrowser
from selenium.webdriver.common.by import By


from selenium.webdriver.support.ui import WebDriverWait
from selenium.webdriver.support import expected_conditions as EC


options = webdriver.ChromeOptions()
options.add_argument("user-data-dir=C:\\Users\\marsedi\\Desktop\\ROBOTS\\Chrometesting\\Default")
wd = webdriver.Chrome(options=options)

wd.get("https://w3.wms.be.xiaomi.com/packing/tool-overseas/index")



wd.find_element(By.ID, "username").send_keys("d.marselos@cosco.gr")
wd.find_element(By.ID, "pwd").send_keys("XXXXXXXXX")
Sign_in = wd.find_element(By.ID, "login-button")
Sign_in.click()

time.sleep(1)

wb = load_workbook(filename = 'C:/Users/Administrator/Downloads/Autobotexcel.xlsx')
ws = wb['Sheet1']



OrderNo = "P1383531652349668899"
Order = WebDriverWait(wd, 20).until(EC.element_to_be_clickable((By.XPATH, '//*[@id="package_id"]')))
Order.send_keys(OrderNo)
Order.send_keys(Keys.ENTER) #hit Enter



time.sleep(2)


for col in ws['A']:
    PalletID = col.value
    Pallet = WebDriverWait(wd, 20).until(EC.element_to_be_clickable((By.XPATH, '//*[@id="goods_id"]')))
    Pallet.send_keys(PalletID)
    time.sleep(1)
    Pallet.send_keys(Keys.ENTER) #hit Enter
    ws.delete_rows(1)
    wb.save('C:/Users/Administrator/Downloads/Autobotexcel.xlsx')

    time.sleep(6)


    Tray = WebDriverWait(wd, 20).until(EC.element_to_be_clickable((By.XPATH, '//*[@id="goods_tray"]')))
    Tray.click()

    time.sleep(1)
```

XIAOMI ROBOT implementation was one of the first Automations we have built

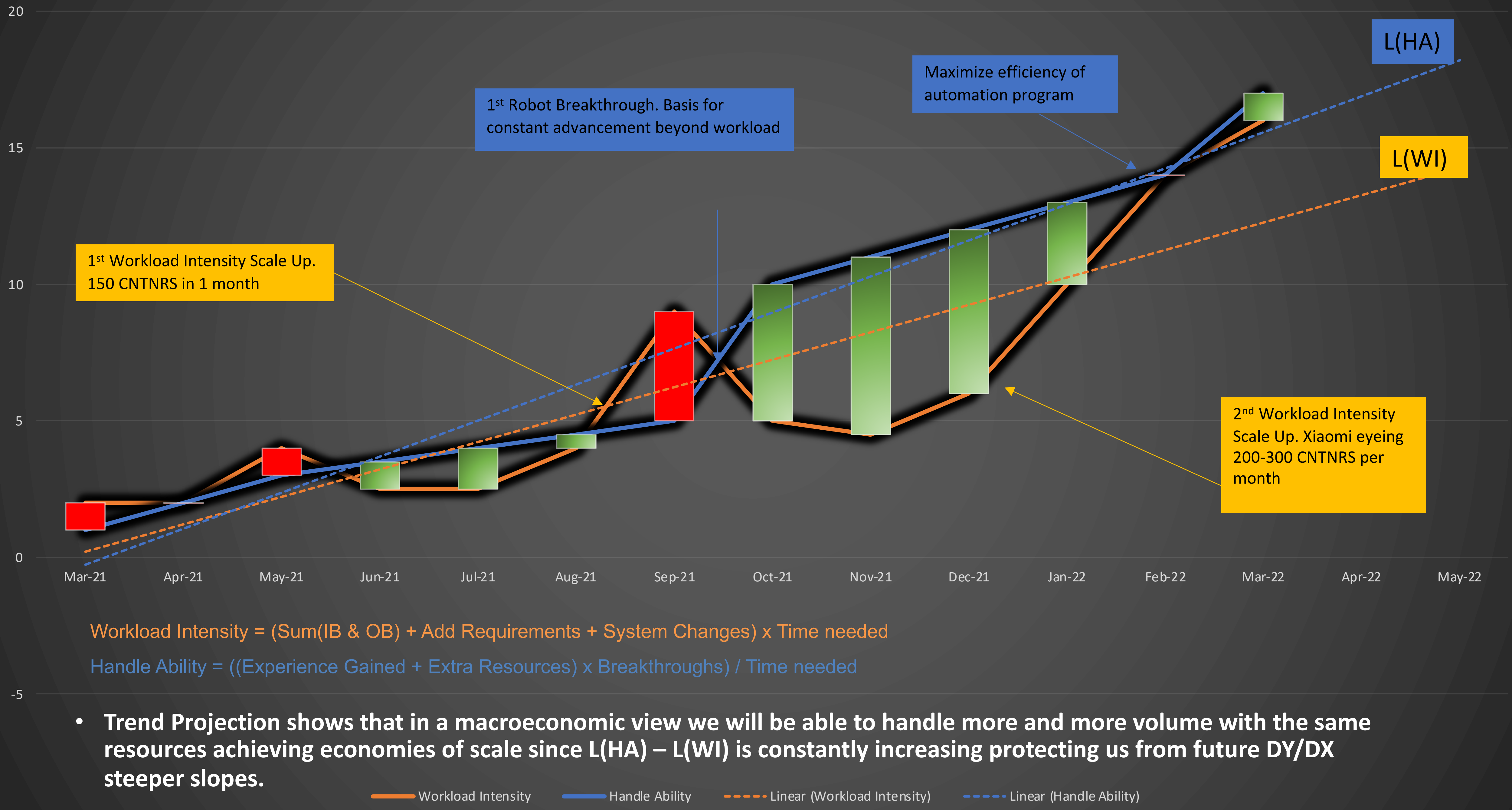
- This automation takes specific info from an excel file and inputs in Xiaomi WMS. It virtually scans a vast amount of Pallet ID's and their respective dimensions and inputs in the system
- It saves 2-3 FULL time employees doing repetitive (dull) work every day of operation
- The robot is faster than a human, does not get confused and does not make mistakes no matter how many hours of operation

This is a portion of the code used for this automation

A.I.



XIAOMI WMS - Workload Intensity vs Handle Ability Chart



1st Workload Intensity Scale Up. 150 CNTNRS in 1 month

1st Robot Breakthrough. Basis for constant advancement beyond workload

Maximize efficiency of automation program

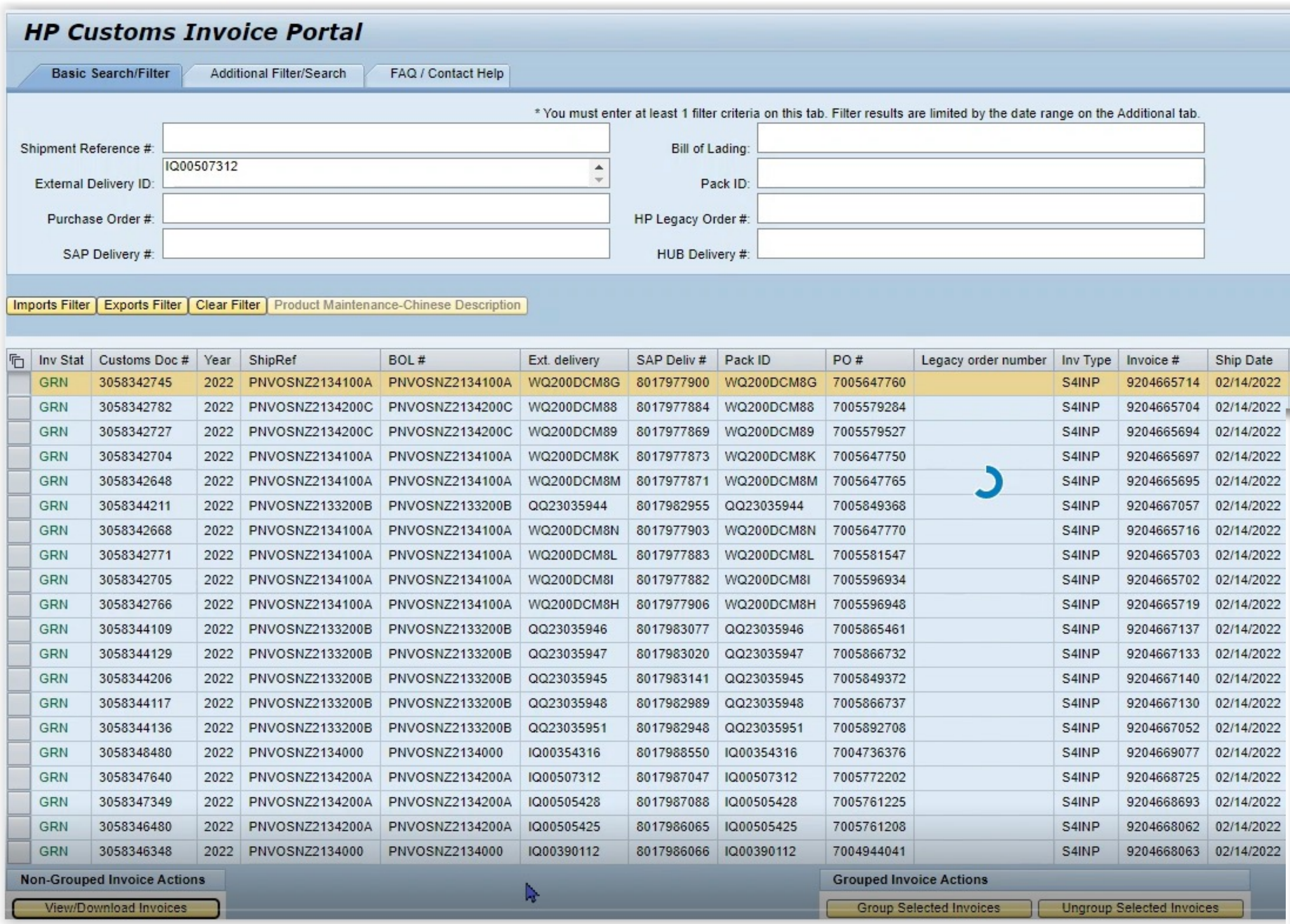
2nd Workload Intensity Scale Up. Xiaomi eyeing 200-300 CNTNRS per month

Workload Intensity = (Sum(IB & OB) + Add Requirements + System Changes) x Time needed

Handle Ability = ((Experience Gained + Extra Resources) x Breakthroughs) / Time needed

- **Trend Projection shows that in a macroeconomic view we will be able to handle more and more volume with the same resources achieving economies of scale since L(HA) – L(WI) is constantly increasing protecting us from future DY/DX steeper slopes.**

CUSTOMS DEPARTMENT



HP Customs Invoice Portal

* You must enter at least 1 filter criteria on this tab. Filter results are limited by the date range on the Additional tab.

Shipment Reference #:

External Delivery ID: IQ00507312

Purchase Order #:

SAP Delivery #:

Bill of Lading:

Pack ID:

HP Legacy Order #:

HUB Delivery #:

Inv Stat	Customs Doc #	Year	ShipRef	BOL #	Ext. delivery	SAP Deliv #	Pack ID	PO #	Legacy order number	Inv Type	Invoice #	Ship Date	Inv Date	Means-of-trspID	Hub Deliv #	Truck Plate	SAP SalesOrd#	SAP Billing#	Group ID	Countr
GRN	3058342745	2022	PNVOSNZ2134100A	PNVOSNZ2134100A	WQ200DCM8G	8017977900	WQ200DCM8G	7005647760		S4INP	9204665714	02/14/2022	02/14/2022				358520592	9204665714		CN
GRN	3058342782	2022	PNVOSNZ2134200C	PNVOSNZ2134200C	WQ200DCM88	8017977884	WQ200DCM88	7005579284		S4INP	9204665704	02/14/2022	02/14/2022				358458840	9204665704		CN
GRN	3058342727	2022	PNVOSNZ2134200C	PNVOSNZ2134200C	WQ200DCM89	8017977869	WQ200DCM89	7005579527		S4INP	9204665694	02/14/2022								
GRN	3058342704	2022	PNVOSNZ2134100A	PNVOSNZ2134100A	WQ200DCM8K	8017977873	WQ200DCM8K	7005647750		S4INP	9204665697	02/14/2022								
GRN	3058342648	2022	PNVOSNZ2134100A	PNVOSNZ2134100A	WQ200DCM8M	8017977871	WQ200DCM8M	7005647765		S4INP	9204665695	02/14/2022								
GRN	3058344211	2022	PNVOSNZ2133200B	PNVOSNZ2133200B	QQ23035944	8017982955	QQ23035944	7005849368		S4INP	9204667057	02/14/2022								
GRN	3058342668	2022	PNVOSNZ2134100A	PNVOSNZ2134100A	WQ200DCM8N	8017977903	WQ200DCM8N	7005647770		S4INP	9204665716	02/14/2022								
GRN	3058342771	2022	PNVOSNZ2134100A	PNVOSNZ2134100A	WQ200DCM8L	8017977883	WQ200DCM8L	7005581547		S4INP	9204665703	02/14/2022								
GRN	3058342705	2022	PNVOSNZ2134100A	PNVOSNZ2134100A	WQ200DCM8I	8017977882	WQ200DCM8I	7005596934		S4INP	9204665702	02/14/2022								
GRN	3058342766	2022	PNVOSNZ2134100A	PNVOSNZ2134100A	WQ200DCM8H	8017977906	WQ200DCM8H	7005596948		S4INP	9204665719	02/14/2022								
GRN	3058344109	2022	PNVOSNZ2133200B	PNVOSNZ2133200B	QQ23035946	8017983077	QQ23035946	7005865461		S4INP	9204667137	02/14/2022								
GRN	3058344129	2022	PNVOSNZ2133200B	PNVOSNZ2133200B	QQ23035947	8017983020	QQ23035947	7005866732		S4INP	9204667133	02/14/2022								
GRN	3058344206	2022	PNVOSNZ2133200B	PNVOSNZ2133200B	QQ23035945	8017983141	QQ23035945	7005849372		S4INP	9204667140	02/14/2022								
GRN	3058344117	2022	PNVOSNZ2133200B	PNVOSNZ2133200B	QQ23035948	8017982989	QQ23035948	7005866737		S4INP	9204667130	02/14/2022								
GRN	3058344136	2022	PNVOSNZ2133200B	PNVOSNZ2133200B	QQ23035951	8017982948	QQ23035951	7005892708		S4INP	9204667052	02/14/2022								
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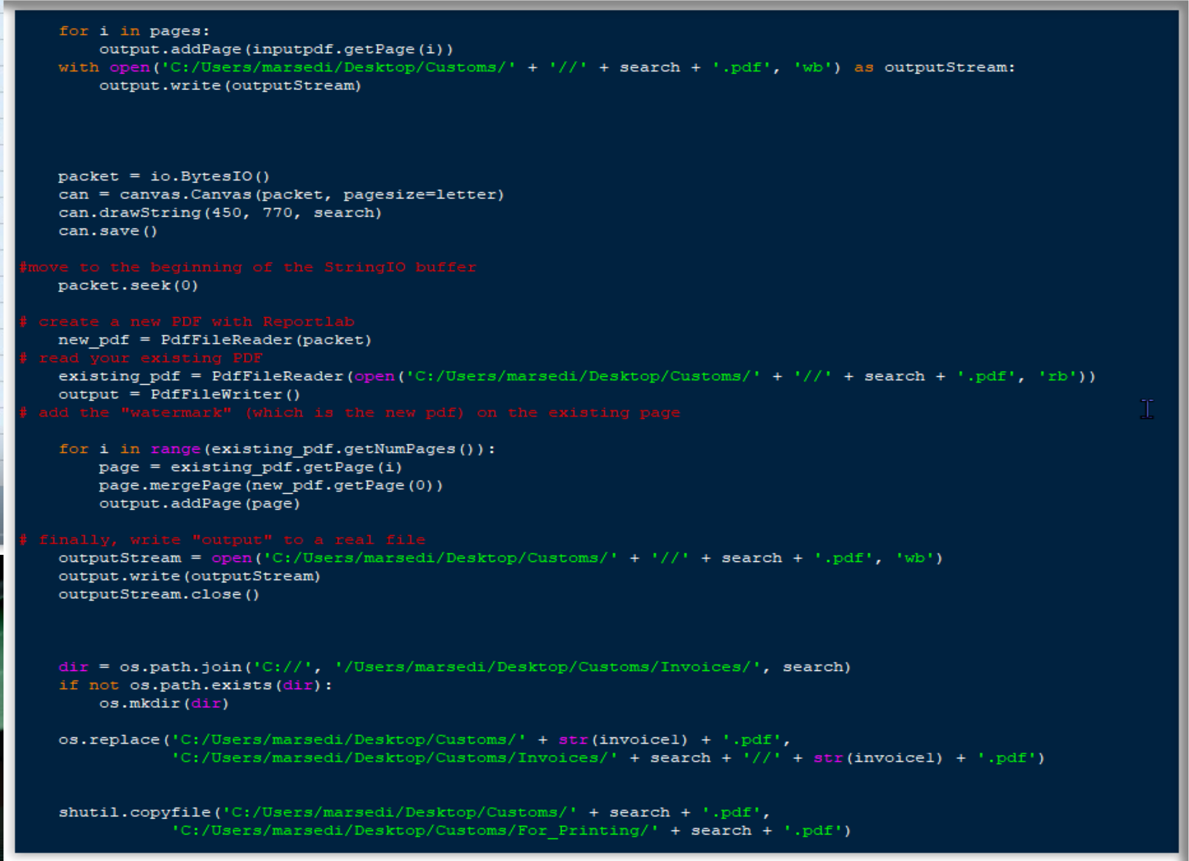
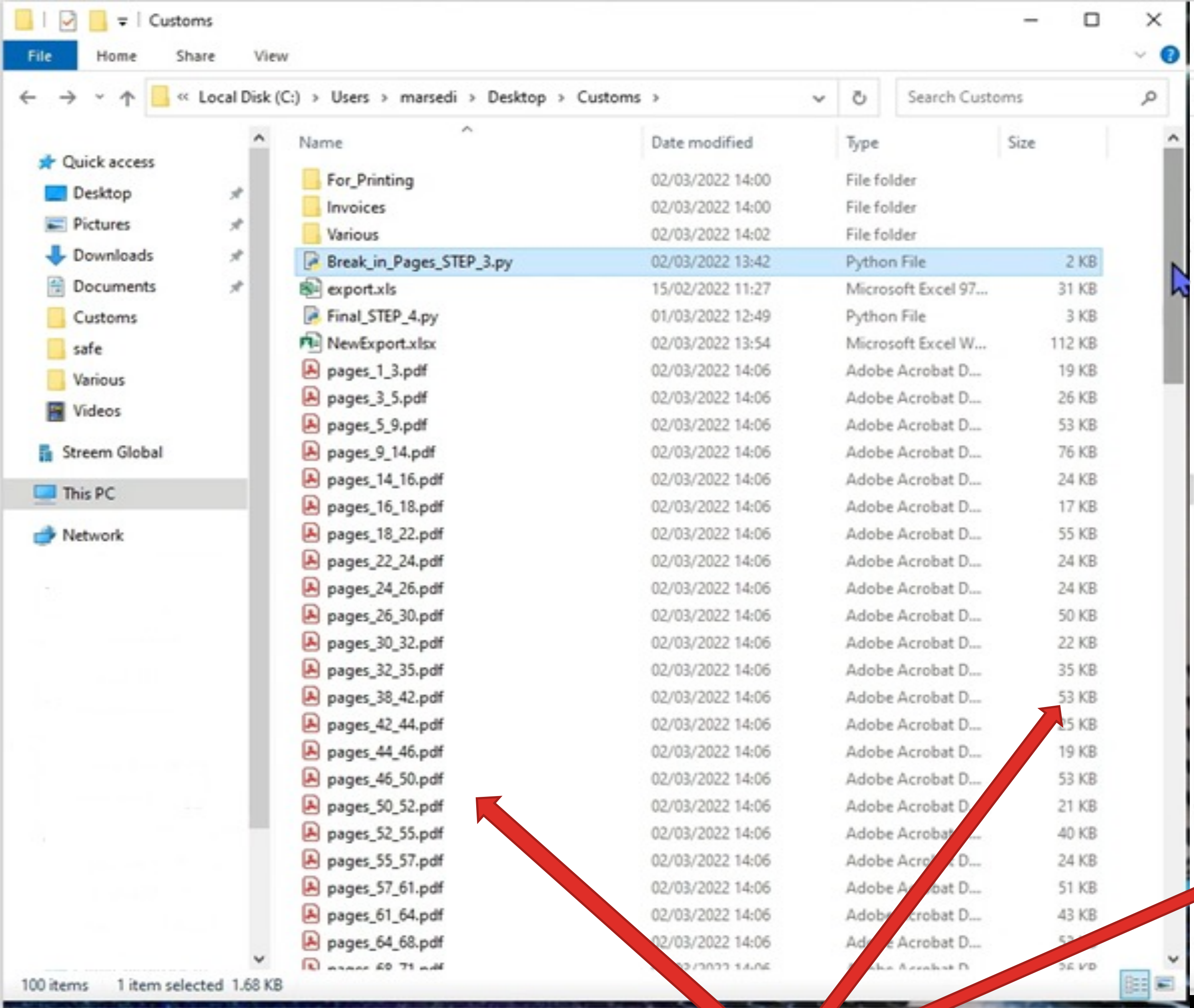
GRN	3058347349	2022	PNVOSNZ2134200A	PNVOSNZ2134200A	IQ00505428	8017987088	IQ00505428	7005761225		S4INP	9204668693	02/14/2022								
GRN	3058346480	2022	PNVOSNZ2134200A	PNVOSNZ2134200A	IQ00505425	8017986065	IQ00505425	7005761208		S4INP	9204668062	02/14/2022								
GRN	3058346348	2022	PNVOSNZ2134000	PNVOSNZ2134000	IQ00390112	8017986066	IQ00390112	7004944041		S4INP	9204668063	02/14/2022								



```
    for i in pages:
        output.addPage(inputpdf.getPage(i))
    with open('C:/Users/marsedi/Desktop/Customs/' + '//' + search + '.pdf', 'wb') as outputStream:
        output.write(outputStream)



    packet = io.BytesIO()
    can = canvas.Canvas(packet, pagesize=letter)
    can.drawString(450, 770, search)
    can.save()

#move to the beginning of the StringIO buffer
    packet.seek(0)

# create a new PDF with Reportlab
    new_pdf = PdfFileReader(packet)
# read your existing PDF
    existing_pdf = PdfFileReader(open('C:/Users/marsedi/Desktop/Customs/' + '//' + search + '.pdf', 'rb'))
    output = PdfFileWriter()
# add the "watermark" (which is the new pdf) on the existing page

    for i in range(existing_pdf.getNumPages()):
        page = existing_pdf.getPage(i)
        page.mergePage(new_pdf.getPage(0))
        output.addPage(page)

# finally, write "output" to a real file
    outputStream = open('C:/Users/marsedi/Desktop/Customs/' + '//' + search + '.pdf', 'wb')
    output.write(outputStream)
    outputStream.close()



    dir = os.path.join('C://', '/Users/marsedi/Desktop/Customs/Invoices/', search)
    if not os.path.exists(dir):
        os.mkdir(dir)

    os.replace('C:/Users/marsedi/Desktop/Customs/' + str(invoice1) + '.pdf',
               'C:/Users/marsedi/Desktop/Customs/Invoices/' + search + '//' + str(invoice1) + '.pdf')


    shutil.copyfile('C:/Users/marsedi/Desktop/Customs/' + search + '.pdf',
                    'C:/Users/marsedi/Desktop/Customs/For_Printing/' + search + '.pdf')
```

A VERY TIME CONSUMING PROCESS IS NOW DONE IN SECONDS



Name	Date modified	Type	Size
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Invoices	02/03/2022 14:00	File folder	
Various	02/03/2022 14:02	File folder	
Break_in_Pages_STEP_3.py	02/03/2022 13:42	Python File	2 KB
export.xls	15/02/2022 11:27	Microsoft Excel 97...	31 KB
Final_STEP_4.py	01/03/2022 12:49	Python File	3 KB
NewExport.xlsx	02/03/2022 13:54	Microsoft Excel W...	112 KB
pages_1_3.pdf	02/03/2022 14:06	Adobe Acrobat D...	19 KB
pages_3_5.pdf	02/03/2022 14:06	Adobe Acrobat D...	26 KB
pages_5_9.pdf	02/03/2022 14:06	Adobe Acrobat D...	53 KB
pages_9_14.pdf	02/03/2022 14:06	Adobe Acrobat D...	76 KB
pages_14_16.pdf	02/03/2022 14:06	Adobe Acrobat D...	24 KB
pages_16_18.pdf	02/03/2022 14:06	Adobe Acrobat D...	17 KB
pages_18_22.pdf	02/03/2022 14:06	Adobe Acrobat D...	55 KB
pages_22_24.pdf	02/03/2022 14:06	Adobe Acrobat D...	24 KB
pages_24_26.pdf	02/03/2022 14:06	Adobe Acrobat D...	24 KB
pages_26_30.pdf	02/03/2022 14:06	Adobe Acrobat D...	50 KB
pages_30_32.pdf	02/03/2022 14:06	Adobe Acrobat D...	22 KB
pages_32_35.pdf	02/03/2022 14:06	Adobe Acrobat D...	35 KB
pages_38_42.pdf	02/03/2022 14:06	Adobe Acrobat D...	53 KB
pages_42_44.pdf	02/03/2022 14:06	Adobe Acrobat D...	25 KB
pages_44_46.pdf	02/03/2022 14:06	Adobe Acrobat D...	19 KB
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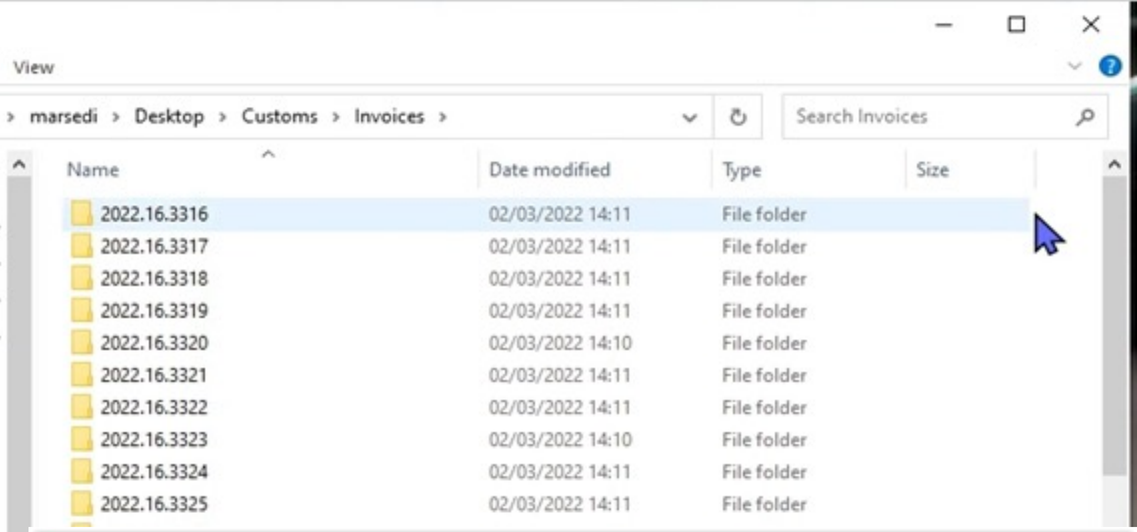
pages_57_61.pdf	02/03/2022 14:06	Adobe Acrobat D...	51 KB
pages_61_64.pdf	02/03/2022 14:06	Adobe Acrobat D...	43 KB
pages_64_68.pdf	02/03/2022 14:06	Adobe Acrobat D...	53 KB
pages_68_71.pdf	02/03/2022 14:06	Adobe Acrobat D...	36 KB

100 items 1 item selected 1.68 KB



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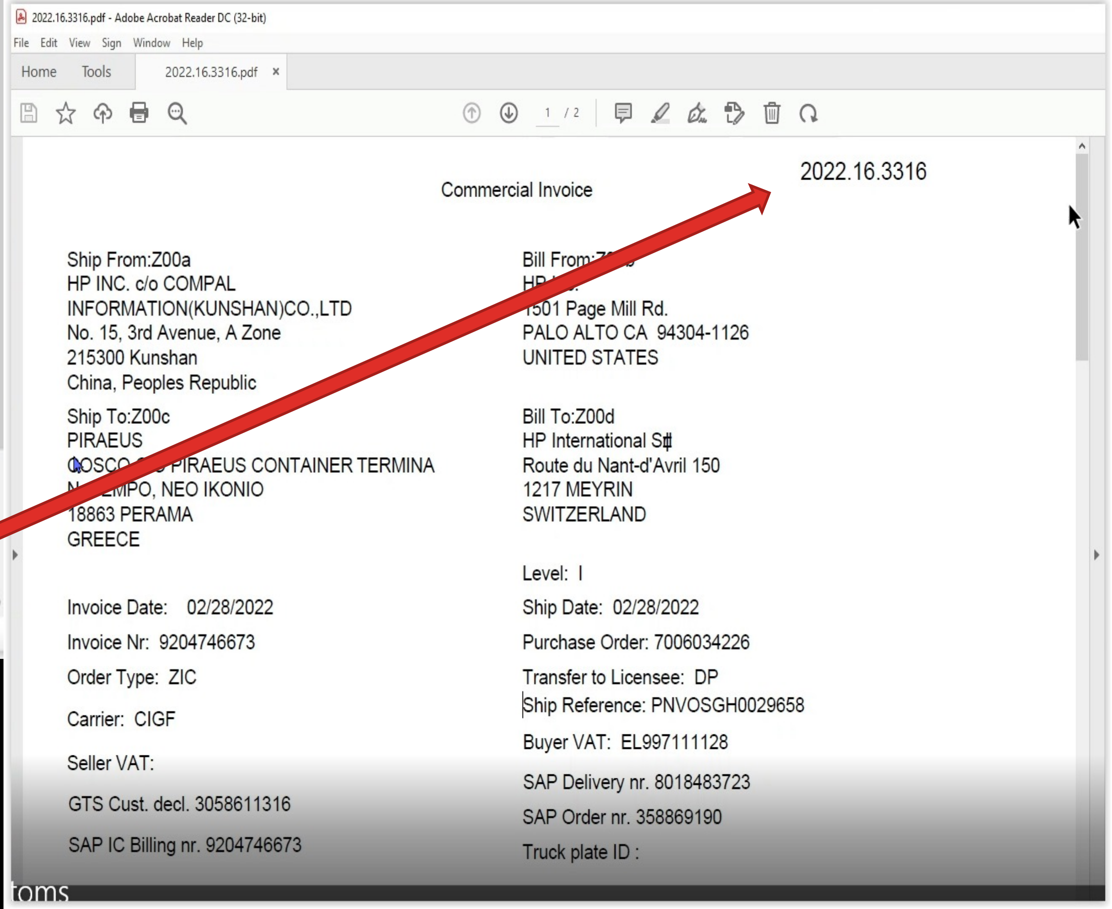
2022.16.3319	02/03/2022 14:11	File folder	
2022.16.3320	02/03/2022 14:10	File folder	
2022.16.3321	02/03/2022 14:11	File folder	
2022.16.3322	02/03/2022 14:11	File folder	
2022.16.3323	02/03/2022 14:10	File folder	
2022.16.3324	02/03/2022 14:11	File folder	
2022.16.3325	02/03/2022 14:11	File folder	


2022.16.3316.pdf - Adobe Acrobat Reader DC (32-bit)
File Edit View Sign Window Help
Home
Tools
2022.16.3316.pdf
1 / 2
toms

2022.16.3316

Commercial Invoice

Ship From:Z00a
HP INC. c/o COMPAL
INFORMATION(KUNSHAN)CO.,LTD
No. 15, 3rd Avenue, A Zone
215300 Kunshan
China, Peoples Republic

Bill From:Z0
HP
1501 Page Mill Rd.
PALO ALTO CA 94304-1126
UNITED STATES

Ship To:Z00c
PIRAEUS
COSCO PIRAEUS CONTAINER TERMINA
N EMPO, NEO IKONIO
18863 PERAMA
GREECE

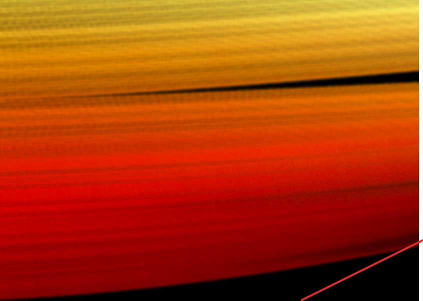
Bill To:Z00d
HP International S
Route du Nant-d'Avril 150
1217 MEYRIN
SWITZERLAND

Level: I

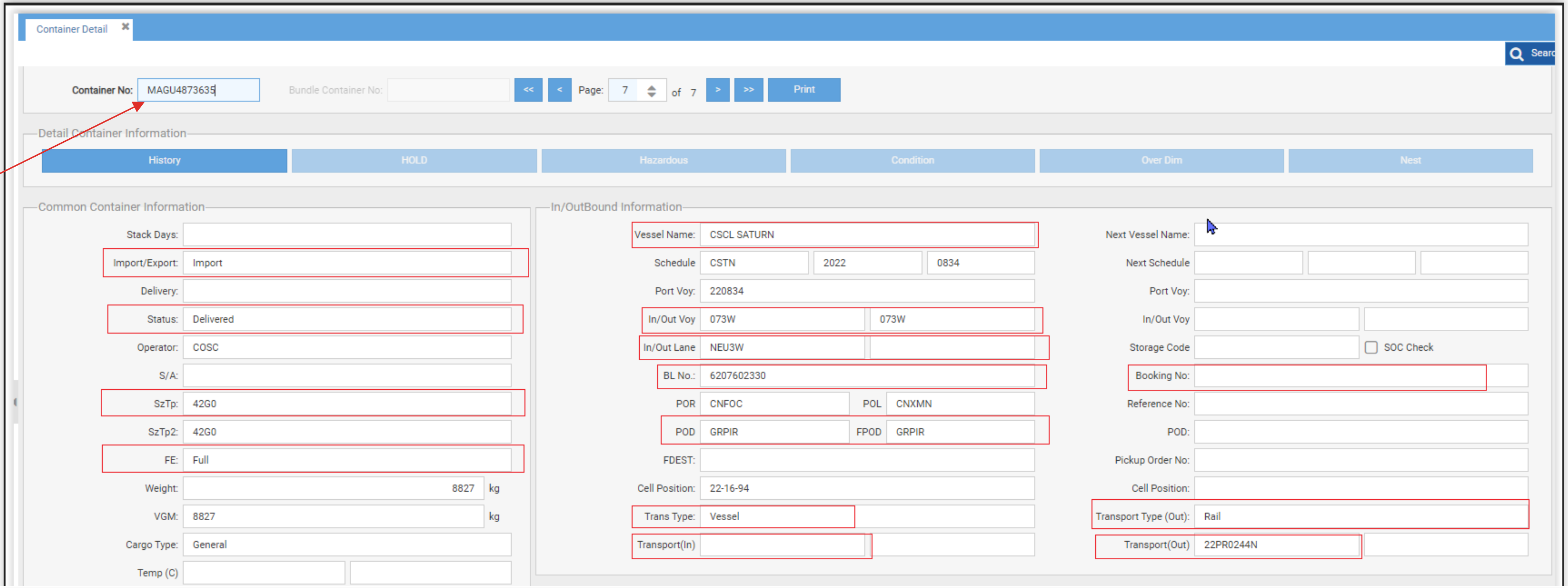
Invoice Date: 02/28/2022
Ship Date: 02/28/2022
Invoice Nr: 9204746673
Purchase Order: 7006034226
Order Type: ZIC
Transfer to Licensee: DP
Ship Reference: PNVOSGH0029658
Carrier: CIGF
Buyer VAT: EL997111128
Seller VAT:
SAP Delivery nr. 8018483723
GTS Cust. decl. 3058611316
SAP Order nr. 358869190
SAP IC Billing nr. 9204746673
Truck plate ID :

- AUTO BREAK 1 FILE INTO MULTIPLE
- CREATE FOLDERS WITH THE INVOICES
- STAMP LOCAL ERP INFO

WITH A SINGLE CLICK



- ROBOT WILL TRY ALL CONTAINERS 1 BY 1 AND GIVE OUT THE INFO NEEDED IN 1 SECOND PER CONTAINER



Container No: MAGU4873635

Bundle Container No:

Page: 7 of 7

Detail Container Information

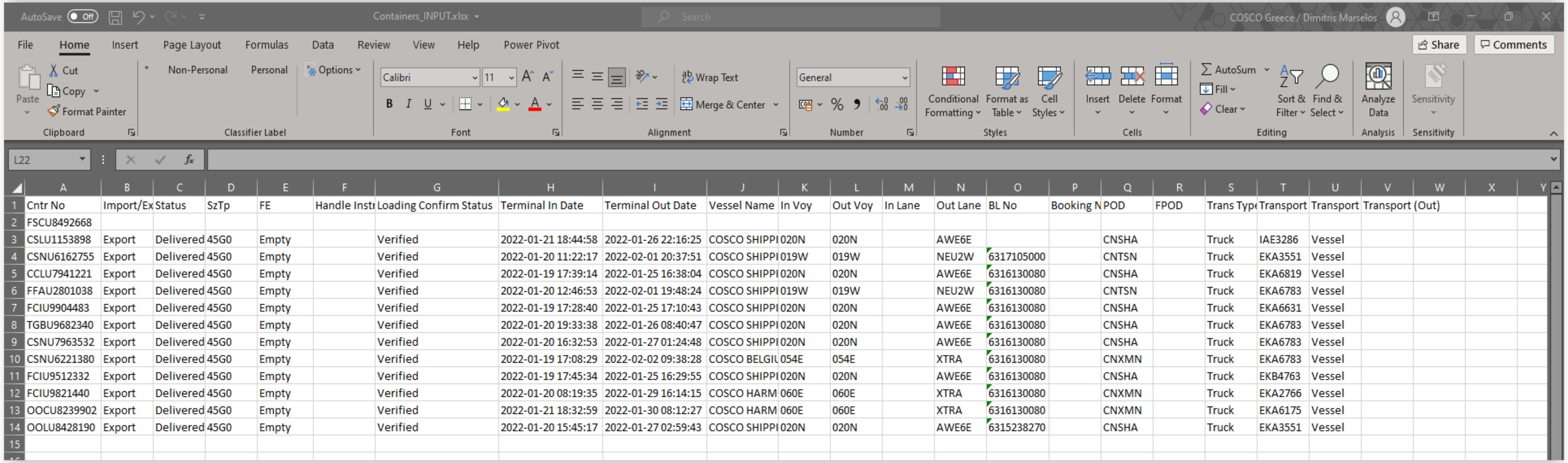
Common Container Information

Stack Days:	
Import/Export:	Import
Delivery:	
Status:	Delivered
Operator:	COSC
S/A:	
SzTp:	42G0
SzTp2:	42G0
FE:	Full
Weight:	8827 kg
VGM:	8827 kg
Cargo Type:	General
Temp (C)	

In/OutBound Information

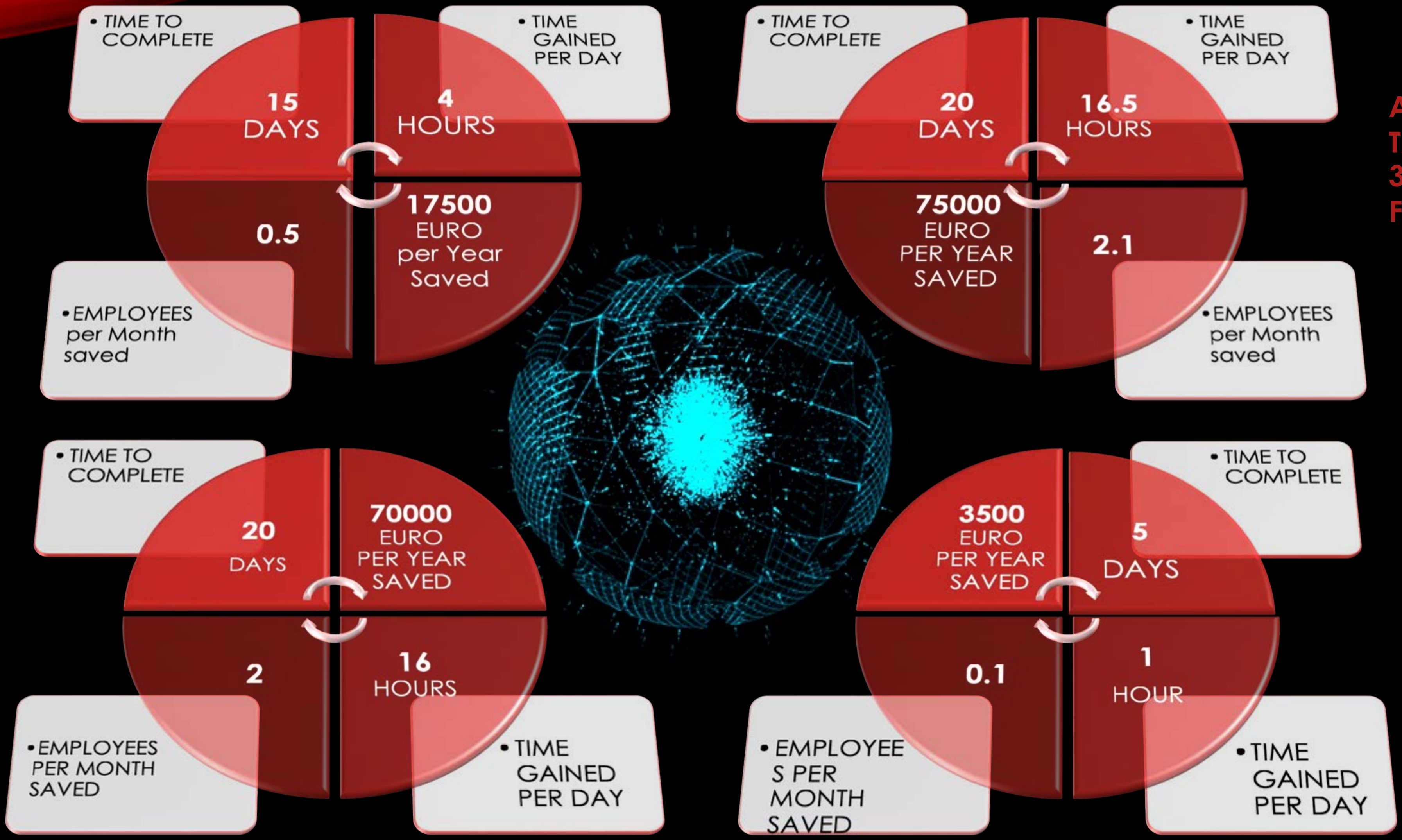
Vessel Name:	CSCL SATURN	Next Vessel Name:	
Schedule	CSTN 2022 0834	Next Schedule	
Port Voy:	220834	Port Voy:	
In/Out Voy	073W 073W	In/Out Voy	
In/Out Lane	NEU3W	Storage Code	□ SOC Check
BL No.:	6207602330	Booking No:	
POR	CNFOC POL CNXMN	Reference No:	
POD	GRPIR FPOD GRPIR	POD:	
FDEST:		Pickup Order No:	
Cell Position:	22-16-94	Cell Position:	
Trans Type:	Vessel	Transport Type (Out):	Rail
Transport(In)		Transport(Out)	22PR0244N

- ROBOT WILL POPULATE AN EXCEL FILE IN A COMMON FOLDER WHERE EVERYONE CAN SEE



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
1	Cntr No	Import/Ex	Status	SzTp	FE	Handle Instr	Loading Confirm Status	Terminal In Date	Terminal Out Date	Vessel Name	In Voy	Out Voy	In Lane	Out Lane	BL No	Booking N	POD	FPOD	Trans Type	Transport	Transport	Transport (Out)
2	FSCU8492668																					
3	CSLU1153898	Export	Delivered	45G0	Empty		Verified	2022-01-21 18:44:58	2022-01-26 22:16:25	COSCO SHIPPI	020N	020N		AWE6E			CNSHA		Truck	IAE3286	Vessel	
4	CSNU6162755	Export	Delivered	45G0	Empty		Verified	2022-01-20 11:22:17	2022-02-01 20:37:51	COSCO SHIPPI	019W	019W		NEU2W	6317105000		CNTSN		Truck	EKA3551	Vessel	
5	CCLU7941221	Export	Delivered	45G0	Empty		Verified	2022-01-19 17:39:14	2022-01-25 16:38:04	COSCO SHIPPI	020N	020N		AWE6E	6316130080		CNSHA		Truck	EKA6819	Vessel	
6	FFAU2801038	Export	Delivered	45G0	Empty		Verified	2022-01-20 12:46:53	2022-02-01 19:48:24	COSCO SHIPPI	019W	019W		NEU2W	6316130080		CNTSN		Truck	EKA6783	Vessel	
7	FCIU9904483	Export	Delivered	45G0	Empty		Verified	2022-01-19 17:28:40	2022-01-25 17:10:43	COSCO SHIPPI	020N	020N		AWE6E	6316130080		CNSHA		Truck	EKA6631	Vessel	
8	TGBU9682340	Export	Delivered	45G0	Empty		Verified	2022-01-20 19:33:38	2022-01-26 08:40:47	COSCO SHIPPI	020N	020N		AWE6E	6316130080		CNSHA		Truck	EKA6783	Vessel	
9	CSNU7963532	Export	Delivered	45G0	Empty		Verified	2022-01-20 16:32:53	2022-01-27 01:24:48	COSCO SHIPPI	020N	020N		AWE6E	6316130080		CNSHA		Truck	EKA6783	Vessel	
10	CSNU6221380	Export	Delivered	45G0	Empty		Verified	2022-01-19 17:08:29	2022-02-02 09:38:28	COSCO BELGIU	054E	054E		XTRA	6316130080		CNXMN		Truck	EKA6783	Vessel	
11	FCIU9512332	Export	Delivered	45G0	Empty		Verified	2022-01-19 17:45:34	2022-01-25 16:29:55	COSCO SHIPPI	020N	020N		AWE6E	6316130080		CNSHA		Truck	EKB4763	Vessel	
12	FCIU9821440	Export	Delivered	45G0	Empty		Verified	2022-01-20 08:19:35	2022-01-29 16:14:15	COSCO HARM	060E	060E		XTRA	6316130080		CNXMN		Truck	EKA2766	Vessel	
13	OOCU8239902	Export	Delivered	45G0	Empty		Verified	2022-01-21 18:32:59	2022-01-30 08:12:27	COSCO HARM	060E	060E		XTRA	6316130080		CNXMN		Truck	EKA6175	Vessel	
14	OOLU8428190	Export	Delivered	45G0	Empty		Verified	2022-01-20 15:45:17	2022-01-27 02:59:43	COSCO SHIPPI	020N	020N		AWE6E	6315238270		CNSHA		Truck	EKA3551	Vessel	
15																						

CONTAINERS



TRANSHIPMENT

- TIME TO COMPLETE: 15 DAYS
- TIME GAINED PER DAY: 4 HOURS
- 17500 EURO per Year Saved
- EMPLOYEES per Month saved: 0.5

CUSTOMS

- TIME TO COMPLETE: 20 DAYS
- TIME GAINED PER DAY: 16.5 HOURS
- 75000 EURO PER YEAR SAVED
- EMPLOYEES per Month saved: 2.1

LOGISTICS

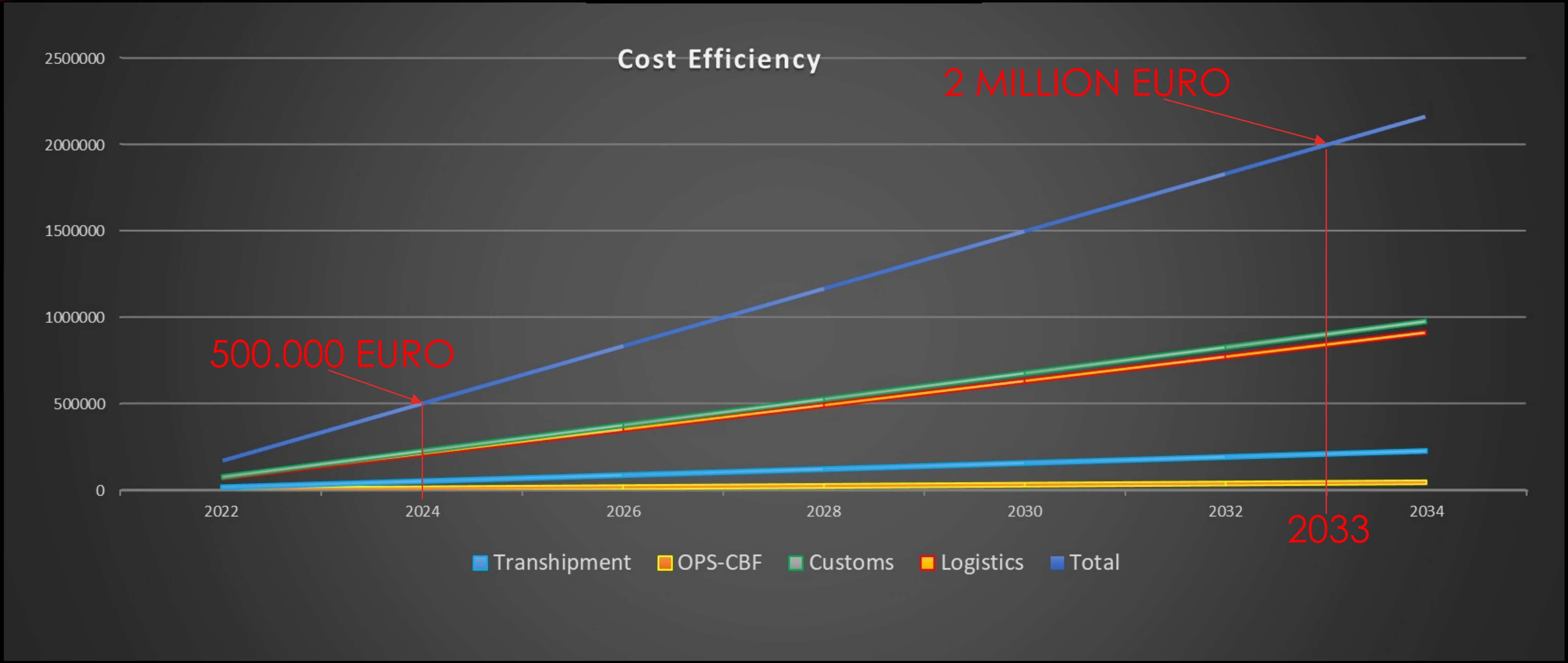
- TIME TO COMPLETE: 20 DAYS
- 70000 EURO PER YEAR SAVED
- EMPLOYEES PER MONTH SAVED: 2
- TIME GAINED PER DAY: 16 HOURS

OPS-CBF

- 3500 EURO PER YEAR SAVED
- TIME TO COMPLETE: 5 DAYS
- EMPLOYEES PER MONTH SAVED: 0.1
- TIME GAINED PER DAY: 1 HOUR

AMOUNTS CALCULATED TAKE AN AVERAGE OF 35000 EURO/YEAR COST FOR AN EMPLOYEE

PASSIVE APPROACH



2 MILLION EURO

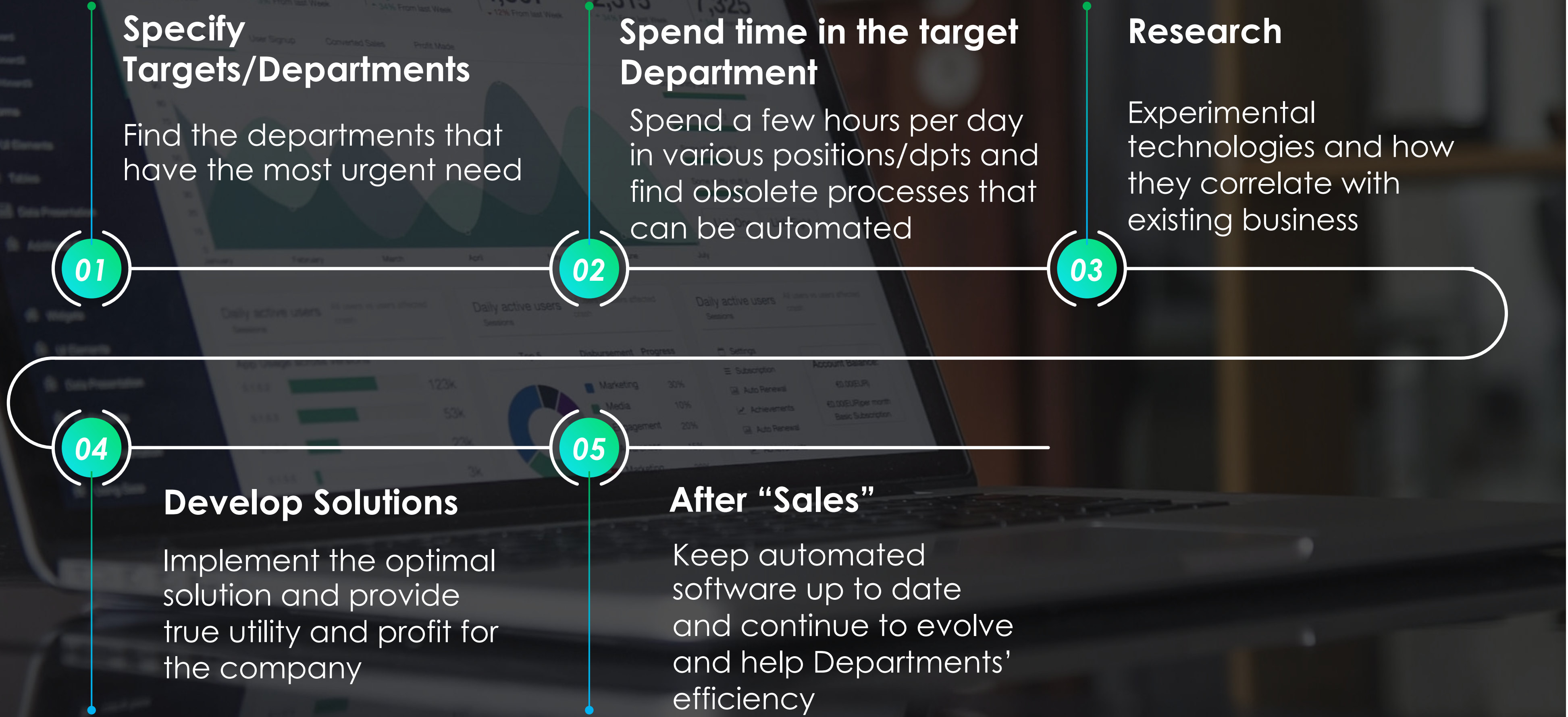
500.000 EURO

2033

What we would gain per Year with the Automations already built

AGGRESIVE APPROACH

Steps in the right direction



01

Specify Targets/Departments

Find the departments that have the most urgent need

02

Spend time in the target Department

Spend a few hours per day in various positions/dpts and find obsolete processes that can be automated

03

Research

Experimental technologies and how they correlate with existing business

04

Develop Solutions

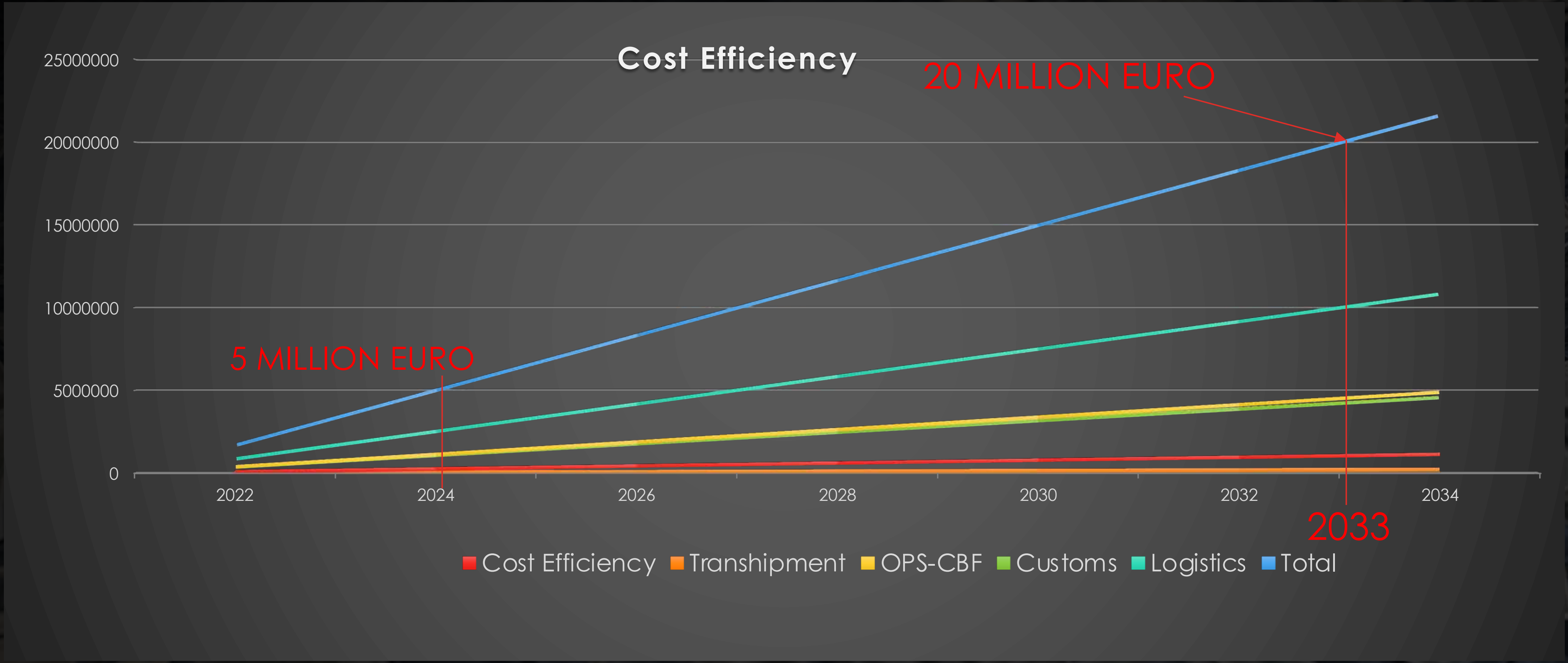
Implement the optimal solution and provide true utility and profit for the company

05

After "Sales"

Keep automated software up to date and continue to evolve and help Departments' efficiency

AGGRESIVE APPROACH



What we CAN gain per Year if we follow Aggressive Approach in Automations

ONE STEP FARTHER

01 Research state of the art technologies

02 Invest in Resources, Manpower and Hardware

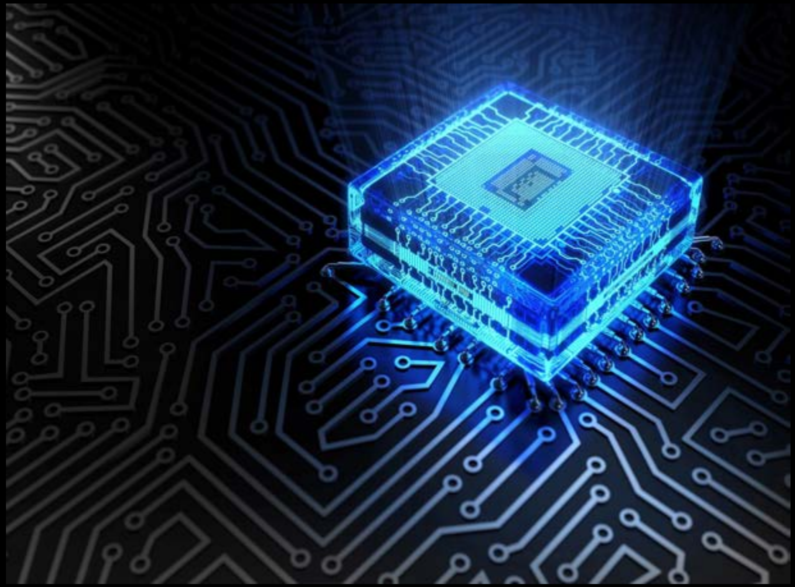
03 Built the Infrastructure

04 Create a Supercomputer

05 Create an A.I.

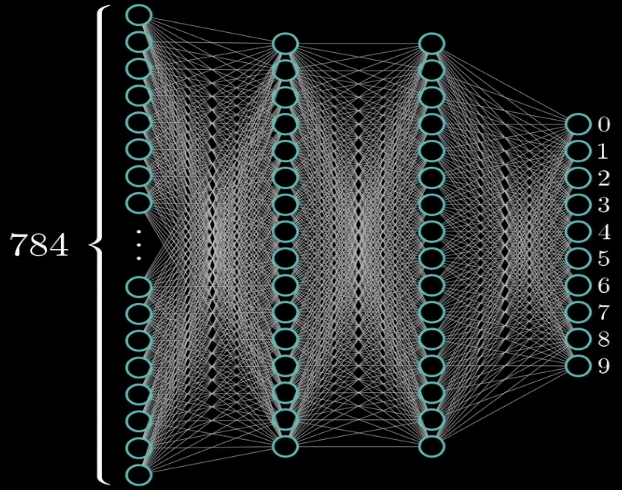
WE HAVE BUILT A SUPERCOMPUTER

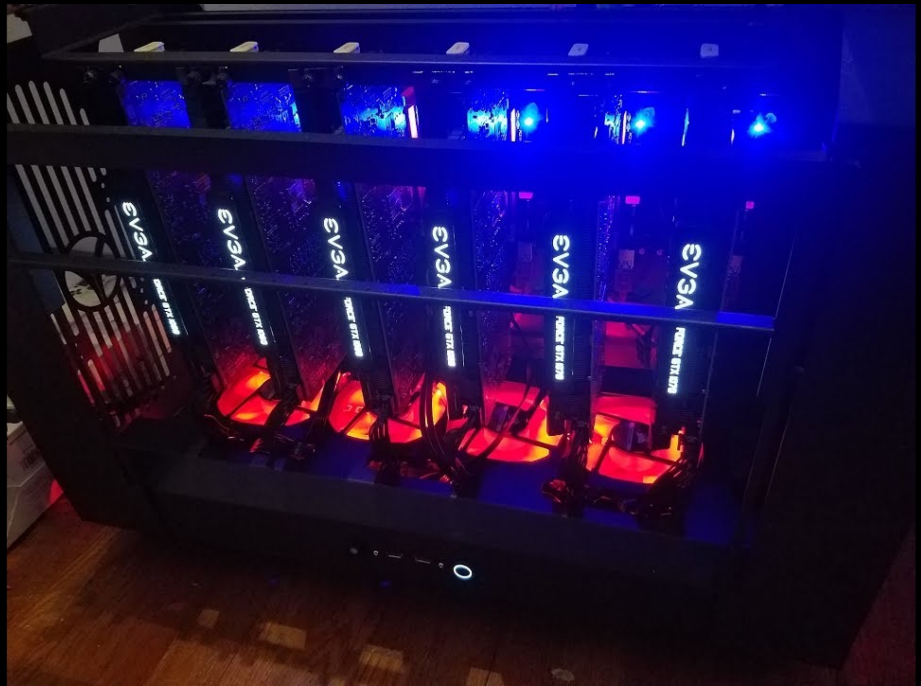
SOFTWARE
OS = LINUX OR WINDOWS 10/11
DRIVERS = Cuda 11
A.I. Platform = Tensorflow/Pytorch/Keras
Prog. language = Python 3.11
Cost = open source = 0



HARDWARE
Computing power = x700 pc's
Cost = x5 average pc

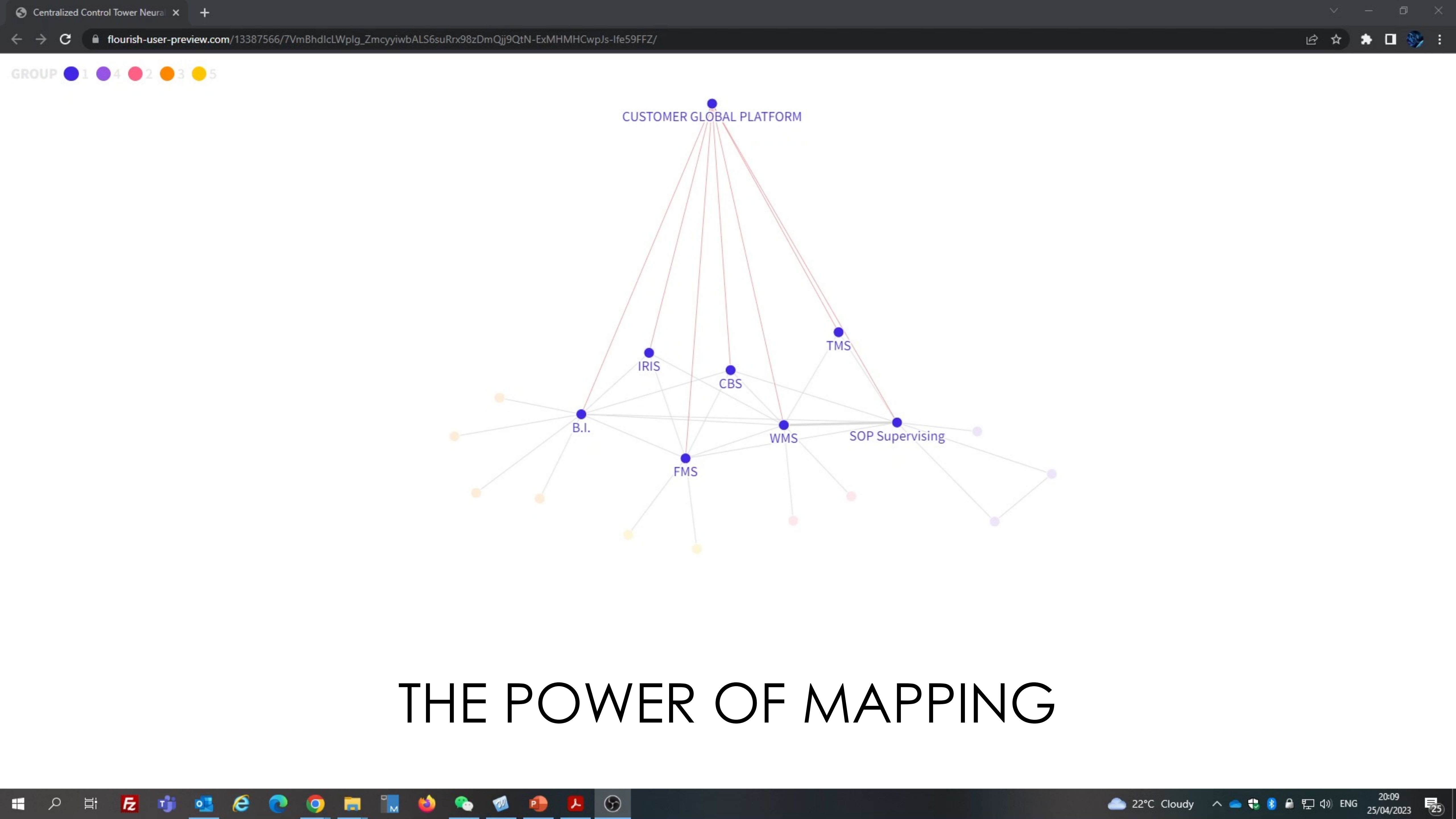
Utility = What an average pc could calculate in 8 months this supercomputer does in **a few hours.**





A.I.

- Supervised Learning
- Unsupervised Learning (Classification)
- Reinforcement Learning (Aplha Go)
- CNN'S (Convolutional Neural Networks) – Self-driving cars, drones, Cvision, autonomous Warehouses
- Recurrent Networks (Time series) used in predicting stocks, demand, unforeseen problems
- GAN's (Generative Adversarial Networks) (deepfakes)
- ChatGPT
- Bearly


Centralized Control Tower Neura
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GROUP ● 1 ● 4 ● 2 ● 3 ● 5
CUSTOMER GLOBAL PLATFORM
TMS
IRIS
CBS
B.I.
WMS
SOP Supervising
FMS
22°C Cloudy
ENG
20:09
25/04/2023
25

THE POWER OF MAPPING

THANK YOU