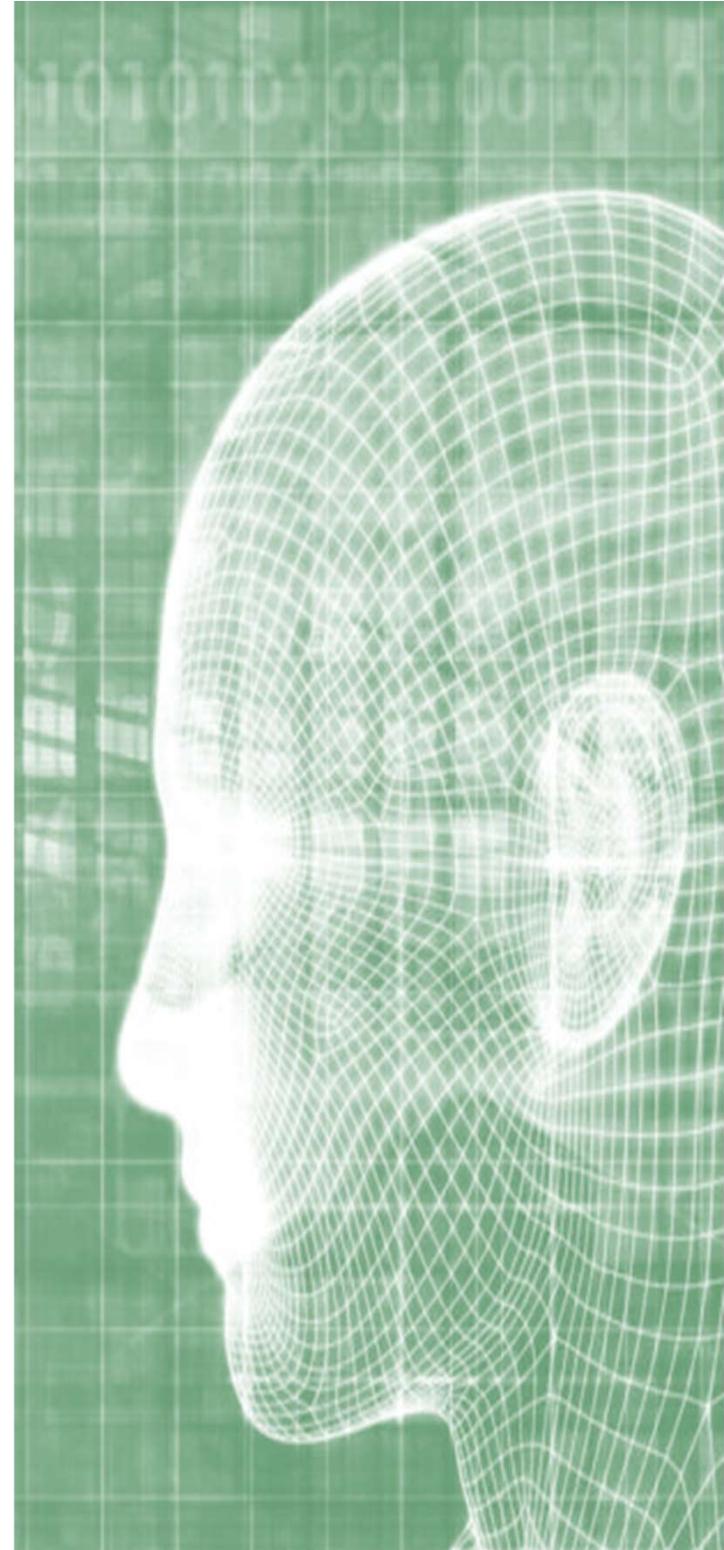


eleven | CentraleSupélec-Essec - Data Augmented Proposal Challenge

To the attention of the Data Science
& Business Analytics students

February 10th, 2025



Your preferred interlocutors today



Simon Revel

Senior consultant

Tech & Digital skills

Artificial Intelligence
Deep Learning
Computer Vision

Sectorial Expertise

Healthcare
Retail
Asset management

Education



CentraleSupélec



ESCP
BUSINESS SCHOOL



Antoine Dargier

Consultant

Tech & Digital skills

Machine Learning
Statistics
Time Series

Sectorial Expertise

Luxury
Energy & Utilities
Software & Data

Education



CentraleSupélec

AGENDA



1. About eleven
2. Structure of a commercial exchange
3. Case presentations
 - a) Your Next Purchase
 - b) The Endless Line
4. General information
 - a) Expected output
 - b) Practical information

eleven is Europe's first ever specialist strategy firm specifically founded to accompany clients' transformation through the AI and digital revolution, thanks to a unique combination of strategy perspective and hands-on approach



DIGITAL & AI STRATEGY SPECIALIST

Revolution is unlocking new, untapped value creation opportunities

STRATEGY X HANDS-ON POSITIONING

Supporting C-level executives and organizations from strategic ignition to project scale-up and

A UNIQUE BLEND OF SKILLS

and data science ones, thanks to its 50+ consultants that master the continuously evolving

DISTINCTIVE ENTREPRENEURIAL MINDSET

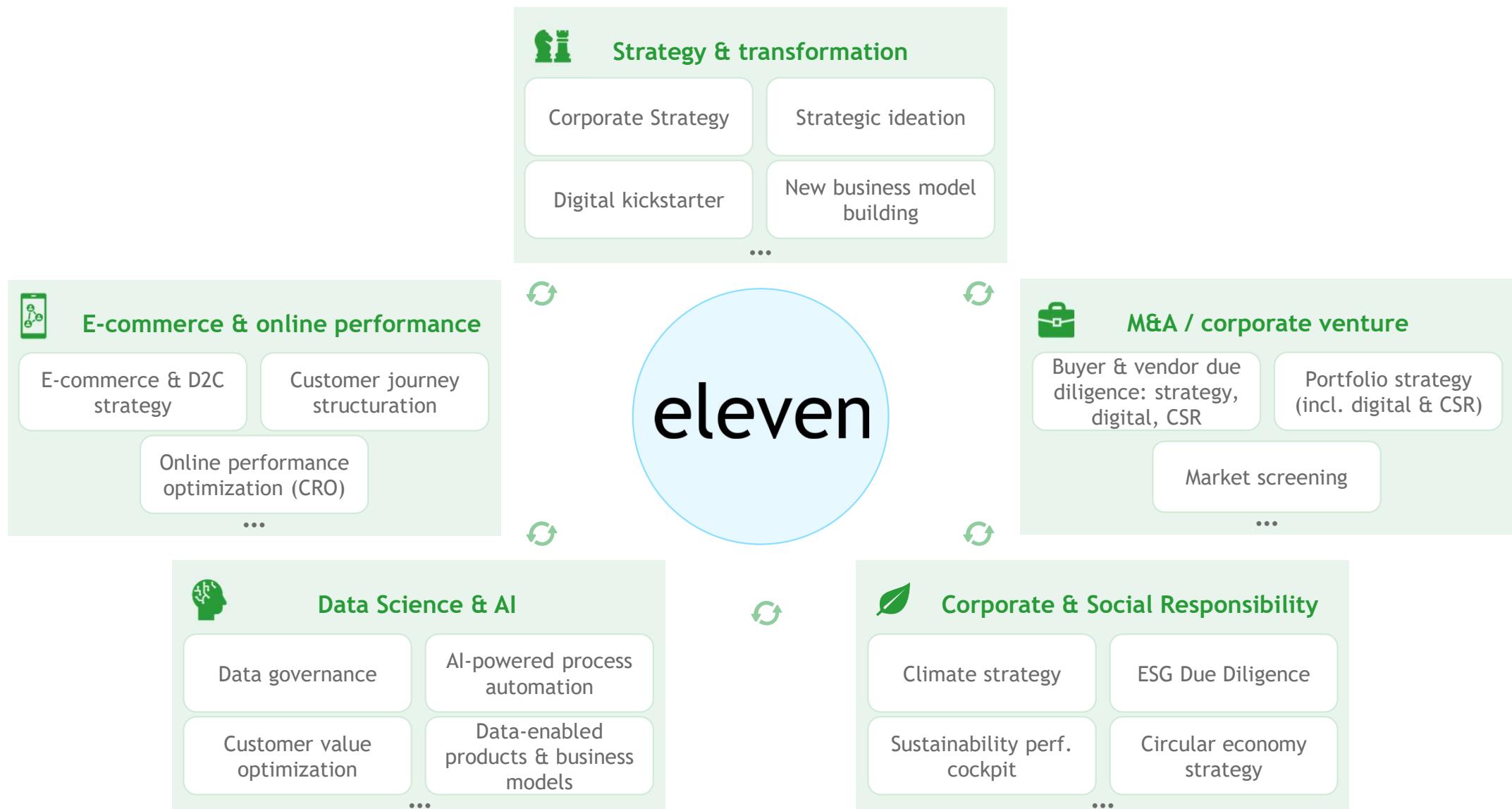
... to provide innovative and dynamic solutions to your business needs

CSR AT THE CORE OF OUR DNA

Our approach enables our clients' projects to meet CSR expectations. Both financial and CSR impacts are tracked, proven and reported thanks to our mastering of digital and AI levers

eleven support companies in **five main fields of intervention**, while enabling its clients to reach the state-of-the-art in these areas thanks to its **unique ecosystem**

Overview of eleven's five main fields of intervention



Sources: eleven research and analysis

eleven serves top large cap clients and leading mid cap players across several key industries as well as leading International large cap and mid cap Private Equity funds

eleven's key references

Corporates



Private Equity



eleven's digital clubs gather two unique communities in e-commerce and AI, providing its clients with a direct access to experts from best-in-class players and to distinctive market data

Digital clubs : a unique and direct access to experts & partners

500+ members at the forefront of e-commerce

An exclusive network in continuous activation...

- ✓ 1 to 2 exclusive events per month
- ✓ Slack community
- ✓ Training & coaching sessions
- ✓ Etc.



40+ sponsors and partners at the core of e-commerce and AI ecosystems

LES RENCONTRES DATA & IA

Réunir les leaders de la donnée

Echanger avec vos pairs, découvrir des nouvelles tendances, partager des réussites comme des échecs, le tout dans un cercle restreint, convivial et confidentiel



>40 members of top data x innovation executives within corporates and funds

... delivering to our clients a unique direct access to:

- ✓ Experts from best-in-class players in e-commerce and AI
- ✓ Market data of up-to-date online performance metrics encompassing multiple industries

eleven together exceptional talent in strategy, business, engineering and data science to help our clients tackle today's most vexing issues and to pursue the digital age's most promising opportunities

STRATEGY



DATA SCIENCE

BUSINESS

ENGINEERING



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Based on a major sales concept: AIDA, eleven relies on its **unique expertise** to provide **innovative solutions** to clients' problems



Catch client's attention:

- Address the client's true needs
- Differentiate...

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Capture attention through an **innovative approach**

Identify client's needs:

- Present the main characteristics of the offer
- Provide a clear storytelling
- Show it is complex

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Generate interest by showing business/operational **impacts** of a data-driven approach

Make the offer irresistible:

- Show the relevance of the offer / the benefits of the proposed solution
- Create dissatisfaction with current situation

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Increase interest with a **promising demo** and **promising results**

Be practical and convincing:

- Be explicit about the next steps
- Help the client visualize their work with you

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Convince of feasibility through a **detailed technical roadmap**



Key elements

✓ Data enriches the discourse and makes it more effective at each stage of a commercial proposal

Your mission: structure a data-augmented commercial exchange

You are expected to deliver the following:

- Your code used to solve the use case, including any relevant dashboard, data analysis, model training, etc. This code should be readable by anyone, with a clear *Readme*, *requirements*, potential *quickstart.py*, etc.
- A “client-ready” PowerPoint presentation of your work, structured as follows:

1

Context & Objectives: what do you understand from the project? Why is the context very complex?



- ✓ Present your understanding of the situation
- ✓ Include the process, the needs, the potential ROI, etc.

➤ c. 2/3 slides

2

Key Success Factors: what would be the reason of your success?

KSF	WHY?	HOW?
Business oriented		
Hands-on approach		
etc.		

- ✓ Explain the reasons of success: strong interaction with client? Deep expertise in AI?

➤ c. 1 slide

3

Proposed methodology: what could you do for the potential client?

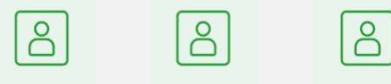


- ✓ What you could do, how, what you have already done, any relevant insight to prove your expertise and how much time do you need for the mission!

➤ c. 6/8 slides

4

Team: who are you and what have you done? Why are you relevant to solve the case?



- ✓ Introduce yourself, your background and explain why you are relevant for this mission

➤ c. 1 slide

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eleven augmented proposal challenge: deliver a convincing commercial exchange to your prospect leveraging your dual expertise in business and data science



Exercise:

- ✓ Make groups of 5/6 people
- ✓ Choose among the 2 available topics
- ✓ On your topic, put yourself in a data consultant's shoes during a 1st commercial exchange:
 - ✓ What is the **context** of the company? (value chain, competition, technological trends, etc.)
 - ✓ How could you generate **added-value for them using potential of new technological enablers**? (e.g., time-series, machine learning for tabular data, NLP, etc.)
 - ✓ How will the mission be **structured**? (roadmap, key steps, meeting with management, etc.)
 - ✓ Can you make a first assessment of the **feasibility** of your solution? (data visualization, 1st demo, etc.)
 - ✓ How will you leverage the results to provide **key business insights**?
- ✓ Note that the best solution for your client **may not be the development of a custom-made solution**, but could be the acquisition of a company, some key partnerships, etc.
- ✓ **Synthesize your work** in a commercial exchange (up to 20 slides)
- ✓ **Upload your work** on the Sharepoint (presentation, code, etc: see details at the end of this presentation)
- ✓ **Present to the jury** and prepare for questions



Your Next Purchase

How to recommend the right products to each client for marketing action?



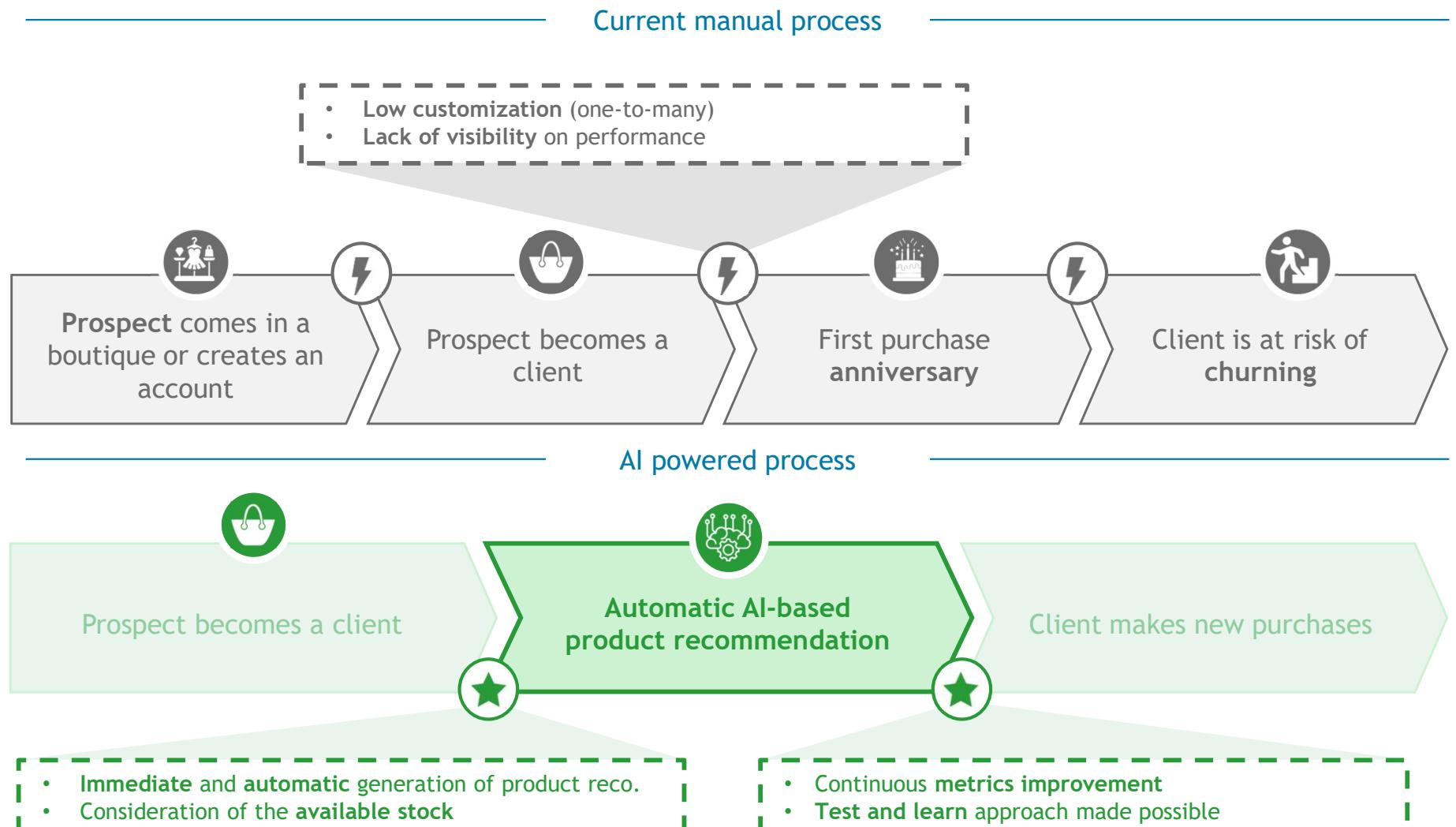
The Endless Line

How to forecast waiting times in a theme park?

Your Next Purchase

Recommending the right product to each client for a marketing action

Context: the potential client, a player of the retail industry, wants to improve the performance of marketing actions (product recommendation) based on artificial intelligence



Key benefits

- Push the **right product** recommendation to the **right client** thus increasing **number of repeaters**
- Save time by automating the creation of product recommendations

Objectives: The client wants to **recommend products relevant to each client** to customize its marketing actions and increase revenues

Scope of the case study

1

What products are each client **most likely to buy?**

2

How to **leverage** this information to give strategic recommendations to the client?



Deliverables

1. The **code** used to build the demo tool



2. A **visual dashboard** to present the results to the client



3. A “client-ready” deck of **PowerPoint slides**

Available data: you have access to past transactions, clients, product with stock level and information about stores



Goal: Recommend the best products of this company specializes in the sale of sports clothing to each of their clients for personalized marketing campaign



Find the best strategy to predict products of interest for each customer



Data Analytics



Clustering



Regression



Deep Learning

...

You have access to **five datasets** to perform your analyses and build your models



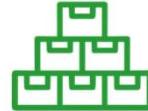
transactions.csv



clients.csv



products.csv



stocks.csv



stores.csv



Relevant **external data** can complete those five datasets



Available data: past information are provided for each transactions in *transactions.csv*

ClientID	ProductID	StoreID	Quantity	SalesNetAmountEuro
6537585694072340000	892503538536458000	3306498059038630000	1	5.99
4683903573974630000	2280106402057210000	7822979941365010000	2	7.99
7339204980378490000	1246438640521450000	1218850731058950000	1	22.99
7771198051684050000	7364330090809850000	7716007625050230000	5	99.96
243477490322694000	535382046483972000	6262119512442080000	1	3.99
5373070388765250000	4574574996007880000	7822979941365010000	3	83.98
8841039056922080000	6535436876635010000	5766738857292150000	1	5.99
243477490322694000	8064013150495270000	6262119512442080000	1	2.99
1816503465925630000	880379940474282000	3306498059038630000	2	83.99
7918267621717290000	4274373756938080000	708932262589097000	1	14.99
3352816460031790000	6840454744607600000	1914079338419200000	3	39.98
212235332606805000	4216012665700460000	7123235743384990000	1	10.99
7325456381087170000	2001495150728660000	4320774246037820000	4	74.97
784139077380373000	4543350547232040000	5060113386821020000	2	7.99
4226302036211470000	17328091691254800	3306498059038630000	2	24.99
3783127575265090000	1993798909216080000	8556013948285210000	1	83.99
8114665738426690000	6473327096629740000	7200865266492670000	1	46.99



Available data: *clients.csv* contains details about the individual clients

ClientID	ClientSegment	ClientCountry	ClientOptInEmail	ClientOptINPhone	ClientGender	Age
4508698145640550000	LOYAL	USA	1	1 M		
2022746661324930000	INACTIVE_1Y	USA	0	1 F		
5794452591674300000	LOYAL	USA	1	1 F		
678556389231830000	LOYAL	USA	1	1 M		
877301557964624000	LOYAL	USA	1	1 F		
6676988281830110000	PROSPECT	USA	1	1 M		
1636102712153810000	LOYAL	USA	1	1 F		
1067727511891480000	LOYAL	USA	1	1 M		
8052621442524460000	LOYAL	USA	1	1 F		
1879338180562010000	INACTIVE_1Y	USA	1	1 F		
6393735473281830000	INACTIVE_1Y	USA	1	1 F		
8108569340379050000	INACTIVE_1Y	USA	0	1 M		
2843443116804930000	LOYAL	USA	1	1 M	30.0	
8956762084833820000	INACTIVE_1Y	USA	1	1 F		
6568360953440530000	LOYAL	USA	0	1 F		
6164464346543320000	INACTIVE_1Y	USA	1	1 F		
7466342141455190000	LOYAL	USA	1	1 F	44.0	



Available data: *products.csv* contains high level information about client's products

ProductID	Category	FamilyLevel1	FamilyLevel2	Universe
8588329712199130000	Basketball	Shoes	Adidas Harden Vol. 4	Women
2134543135517270000	Football	Shoes	Nike Mercurial Vapor	Women
7624925797167030000	Football	Ball	Nike Ordem V	Women
2270862675779330000	Football	Jersey	Adidas Home Jersey	Men
6504730903144740000	Football	Shorts	Adidas Squadra 21	Women
4829295361777980000	Football	Jersey	Adidas Home Jersey	Men
7935798579204670000	Football	Jersey	Adidas Home Jersey	Men
3698347634873450000	Football	Shoes	Nike Mercurial Vapor	Women
7713296683691040000	Football	Ball	Nike Ordem V	Women
43220326960179300	Football	Ball	Nike Ordem V	Women
2960383786256110000	Football	Shoes	New Balance Furon	Women
7767205741051530000	Football	Shoes	Adidas Predator	Men
5661242225760100000	Football	Ball	Adidas Telstar 18	Men
3850128663863540000	Football	Shoes	New Balance Furon	Women
3395043938592750000	Football	Shorts	Nike Dri-FIT	Women
7130074757728490000	Football	Shorts	Adidas Squadra 21	Men
2800704698504110000	Football	Ball	Puma Final 1	Women



Available data: *stocks.csv* provides stock by country

StoreCountry	ProductID	Quantity
AUS	1284651161701380000	2.0
AUS	6076274819885030000	2.0
AUS	6019386668821120000	2.0
AUS	2122575437123250000	2.0
AUS	5901681811213090000	2.0
AUS	5195625195157270000	2.0
AUS	3850091287569970000	1.0
AUS	7723338481459020000	3.0
AUS	310504000978060000	2.0
AUS	1224535603186040000	1.0
AUS	3274981684168810000	1.0
AUS	7148728138092920000	3.0
AUS	3570508915410090000	5.0
AUS	9039906805668370000	2.0
AUS	4101272015341460000	3.0
AUS	8523563856621850000	1.0
AUS	7169400755031740000	4.0



Available data: *stores.csv* gives the country of each store

StoreID	StoreCountry
7793989562498220000	BRA
5301108587679200000	BRA
2908896877692950000	BRA
2718131790848670000	BRA
7819332417840560000	BRA
6524776804058170000	FRA
66413934723788800	FRA
4351033551716780000	FRA
8696981135006800000	FRA
7637657206478660000	FRA
3440206128053660000	FRA
4439061635768160000	FRA
5133673095652920000	FRA
395121715121348000	FRA
2353472391675350000	FRA
3189779657740820000	FRA
3645972967113440000	FRA

AGENDA

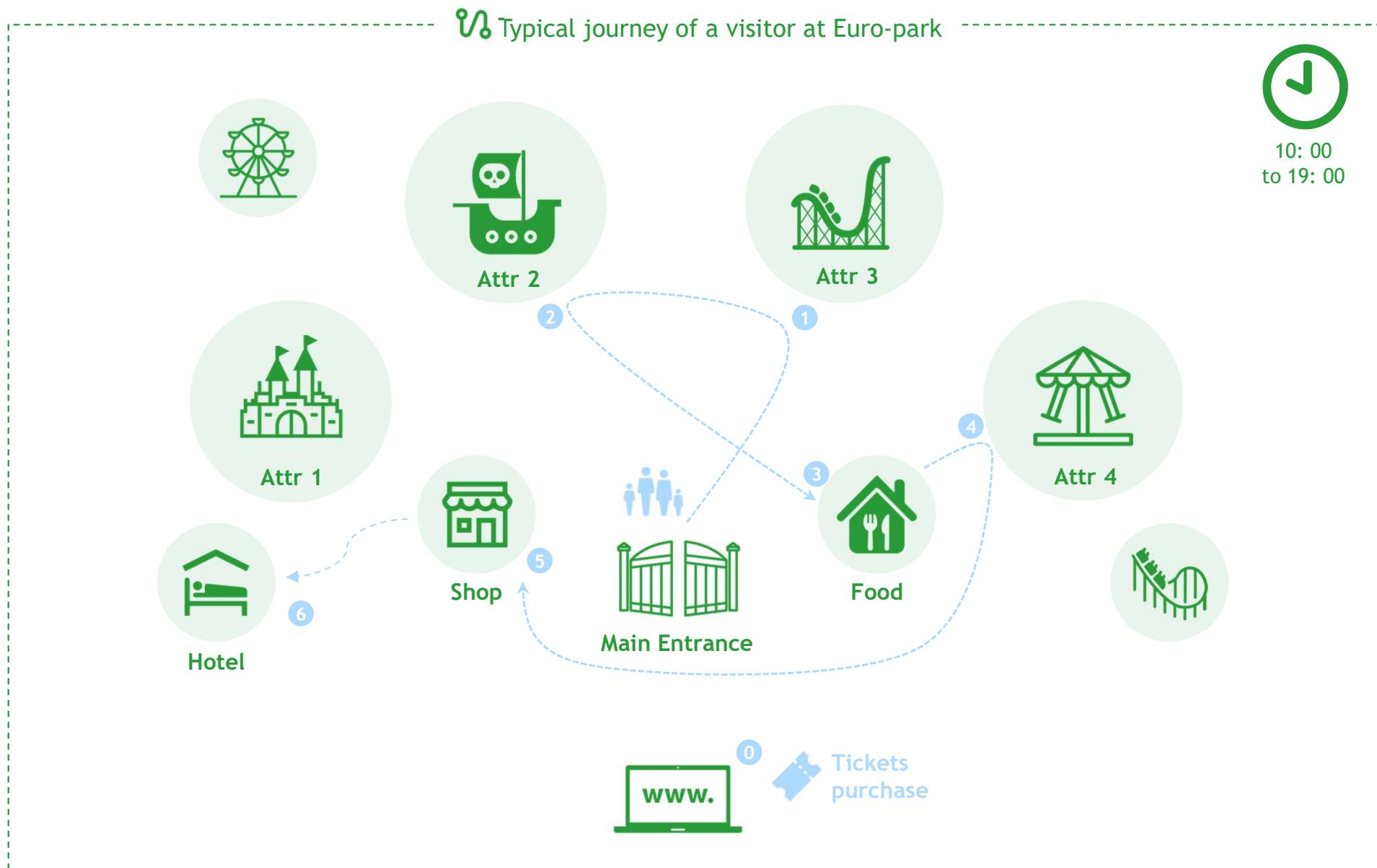


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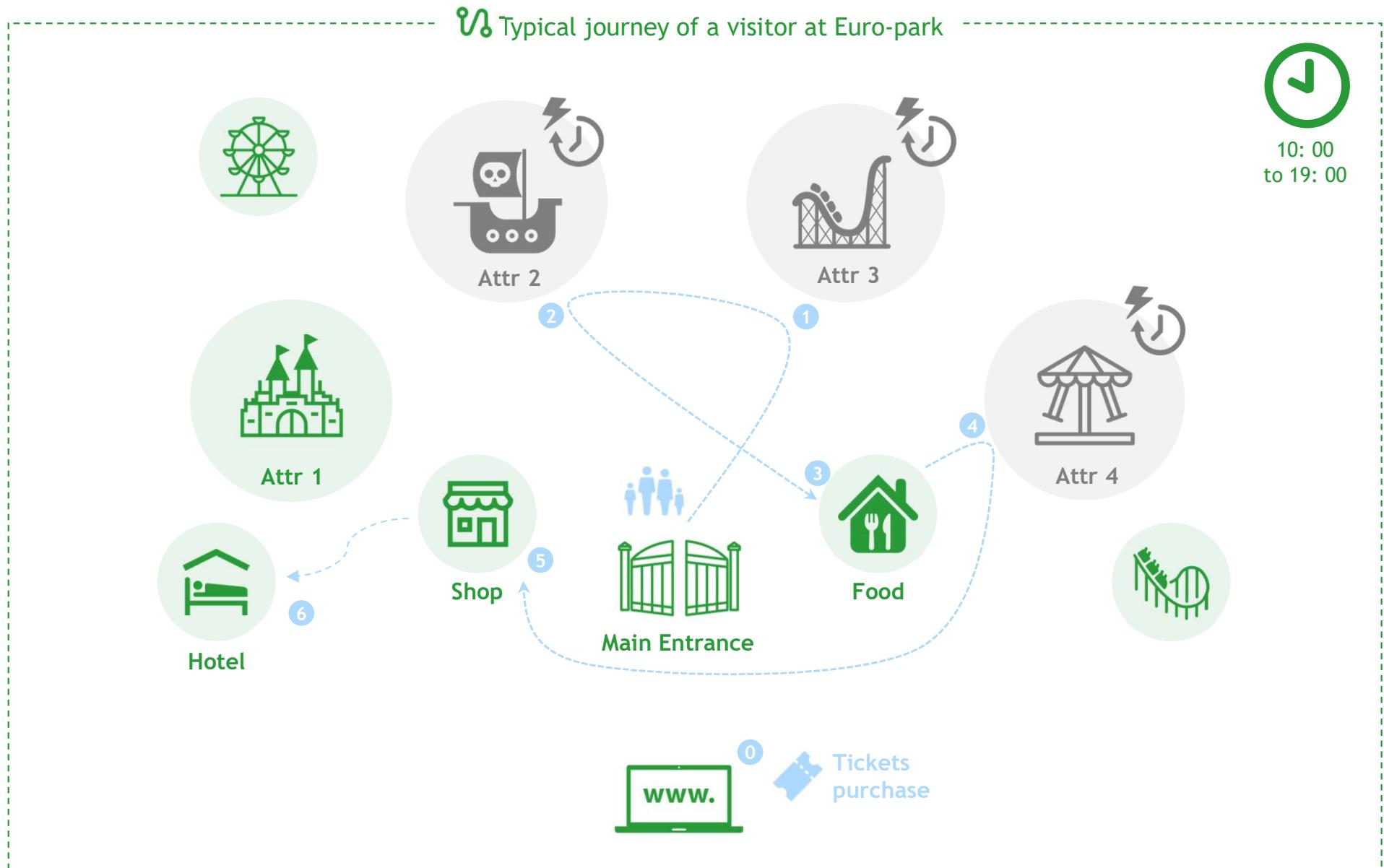
The Endless Line

Forecasting waiting times in a theme park to improve visitor experience

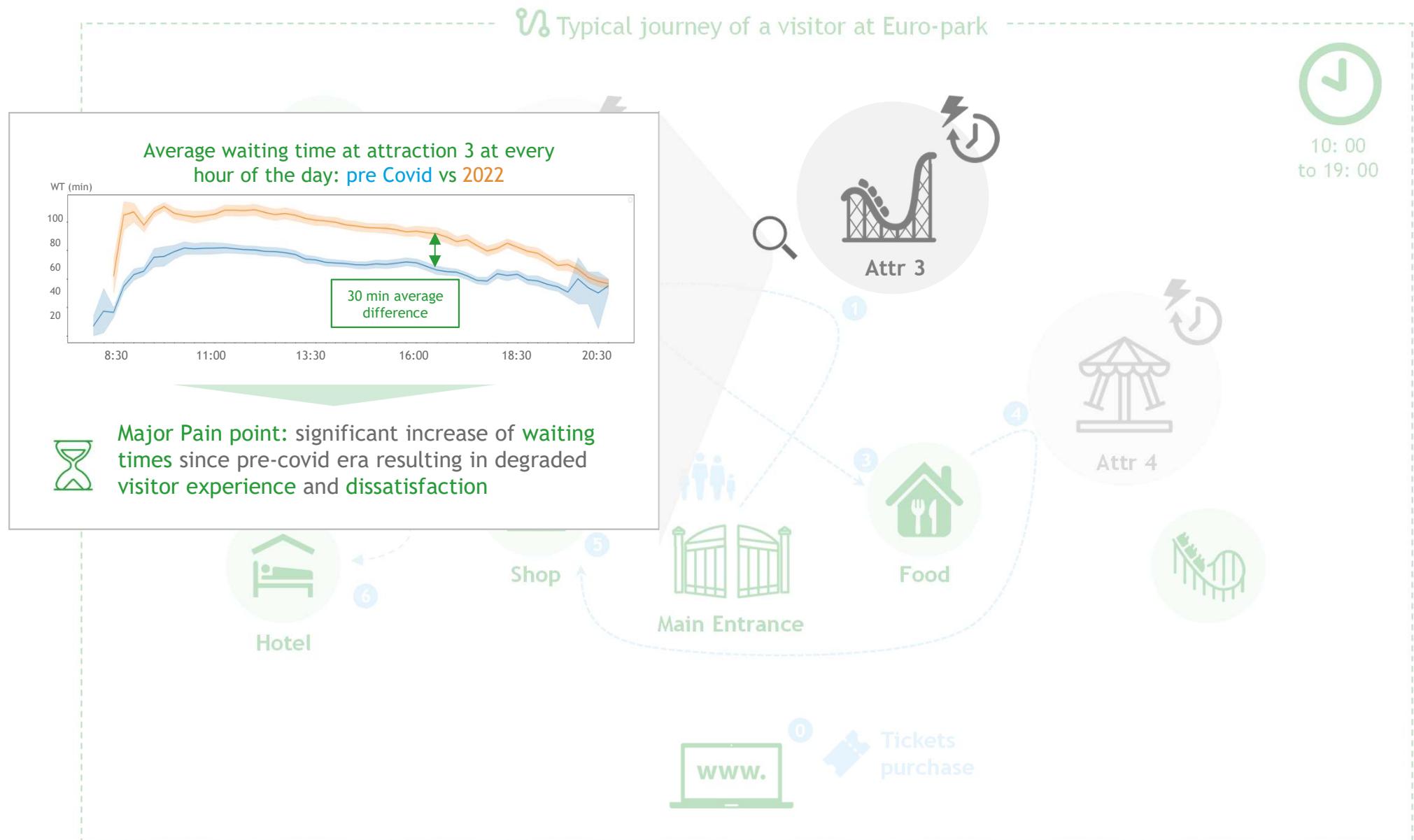
Context: Euro-park, a global theme park, is experiencing a significant increase of **waiting times** at attractions, which affects **visitor satisfaction** (1/3)



Context: Euro-park, a global theme park, is experiencing a significant increase of **waiting times** at attractions, which affects **visitor satisfaction** (2/3)



Context: Euro-park, a global theme park, is experiencing a significant increase of **waiting times** at attractions, which affects **visitor satisfaction** (3/3)



Objectives: Euro-park, therefore, wants to accurately **forecast waiting times** for its attractions and identify **use cases** to **leverage** this information to improve the park's **KPIs**

Scope of the case study

1

How to accurately **forecast** attractions waiting times?

2

How to **leverage** this information to enhance Euro-park's **KPIs**?



Deliverables



```
def main():
    # Code for the demo tool goes here
    pass
```

1. The **code** used to build the demo tool



2. A **visual dashboard** to present the results to the client



3. A “client-ready” deck of **PowerPoint slides**

Objectives: Euro-park, therefore, wants to accurately **forecast waiting times** for its attractions and identify **use cases** to leverage this information to improve the park's **KPIs**

Scope of the case study

1

How to accurately **forecast** attractions waiting times?

2

The client is looking for **medium/long term forecasts**, assuming **normal operation** of the attractions. Therefore, make sure to remove any data related to any **unplanned event**

formation to
?ls?



Deliverables



1. The code used to build the demo tool



2. A visual dashboard to present the results to the client



3. A “client-ready” deck of PowerPoint slides

Data available: you have access to past waiting times, parks' attendance, weather data, schedule of parades and opening/closing times

Euro-park operates **two theme parks** in the same location: in this case study, we will focus on waiting times at **PortAventura World**



You have access to **five datasets** to perform your analyses and build your models



waiting_times.csv



attendance.csv



entity_schedule.csv



weather.csv



parade_night_show.csv



link_attraction_park.csv





Data available: past waiting times are provided for each attraction at a granularity of 15 minutes

15 minutes
time slots

Waiting
time

WORK_DATE	DEB_TIME	DEB_TIME_HOUR	FIN_TIME	ENTITY_DESCRIPTION_SHORT	WAIT_TIME_MAX	NB_UNITS	GUEST_CARRIED	CAPACITY	ADJUST_CAPACITY	OPEN_TIME	UP_TIME	DOWNTIME	NB_MAX_UNIT
01/01/2018	01/01/2018 21:00	21	01/01/2018 21:15	Roller Coaster	0 2.0	0.0	0.0	0.0	0.0	0	0	0 2.0	
01/01/2018	01/01/2018 19:30	19	01/01/2018 19:45	Bumper Cars	5 18.0	148.0	254.749	254.75	254.75	15	15	0 18.0	
01/01/2018	01/01/2018 22:30	22	01/01/2018 22:45	Rapids Ride	0 1.0	0.0	0.0	0.0	0.0	0	0	0 2.0	
01/01/2018	01/01/2018 12:45	12	01/01/2018 13:00	Crazy Dance	5 1.0	46.0	250.001	250.0	250.0	15	15	0 1.0	
01/01/2018	01/01/2018 17:00	17	01/01/2018 17:15	Skyway	5 15.0	92.0	211.5	198.25	198.25	15	15	0 16.0	
01/01/2018	01/01/2018 18:15	18	01/01/2018 18:30	Free Fall	50 3.0	0.0	0.0	0.0	0.0	0	0	0 3.0	
01/01/2018	01/01/2018 13:30	13	01/01/2018 13:45	Monorail	70 11.0	145.0	223.751	223.75	223.75	15	15	0 11.0	
01/01/2018	01/01/2018 15:00	15	01/01/2018 15:15	Roller Coaster	20 2.0	51.0	75.0	75.0	75.0	15	15	0 2.0	
01/01/2018	01/01/2018 18:00	18	01/01/2018 18:15	Swing Ride	50 12.0	74.0	242.25	242.25	242.25	15	15	0 12.0	
01/01/2018	01/01/2018 17:15	17	01/01/2018 17:30	Crazy Bus	5 6.0	271.0	353.0	353.0	353.0	15	15	0 6.0	
01/01/2018	01/01/2018 13:15	13	01/01/2018 13:30	Drop Tower	5 16.0	41.9999	140.25	140.25	140.25	15	15	0 16.0	
01/01/2018	01/01/2018 18:45	18	01/01/2018 19:00	Spinning Coaster	45 6.0	309.0	526.25	526.25	526.25	15	15	0 6.0	
01/01/2018	01/01/2018 21:00	21	01/01/2018 21:15	Monorail	0 11.0	0.0	0.0	0.0	0.0	0	0	0 11.0	
01/01/2018	01/01/2018 11:30	11	01/01/2018 11:45	Scooby Doo	60 36.0	162.0	425.0	425.0	425.0	15	15	0 36.0	
01/01/2018	01/01/2018 19:30	19	01/01/2018 19:45	Superman Ride	0 2.0	0.0	0.0	0.0	0.0	0	0	0 3.0	
01/01/2018	01/01/2018 17:30	17	01/01/2018 17:45	Spiral Slide	0 2.0	37.0	75.0	75.0	75.0	15	15	0 2.0	
01/01/2018	01/01/2018 22:30	22	01/01/2018 22:45	Inverted Coaster	0 1.0	0.0	0.0	0.0	0.0	0	0	0 3.0	
01/01/2018	01/01/2018 11:00	11	01/01/2018 11:15	Spinning Coaster	25 5.0	230.0	526.25	438.5	438.5	15	15	0 6.0	
01/01/2018	01/01/2018 21:30	21	01/01/2018 21:45	Water Ride	15 10.0	0.0	0.0	0.0	0.0	0	0	0 11.0	
01/01/2018	01/01/2018 12:45	12	01/01/2018 13:00	Water Ride	20 10.0	133.0	247.001	224.5	224.5	15	15	0 11.0	
01/01/2018	01/01/2018 13:15	13	01/01/2018 13:30	Power Tower	5 16.0	47.0	234.499	220.75	220.75	15	15	0 17.0	
01/01/2018	01/01/2018 20:15	20	01/01/2018 20:30	Roller Coaster	0 2.0	0.0	0.0	0.0	0.0	0	0	0 2.0	
01/01/2018	01/01/2018 13:15	13	01/01/2018 13:30	Free Fall	90 3.0	61.0	134.749	134.75	134.75	15	15	0 3.0	
01/01/2018	01/01/2018 11:30	11	01/01/2018 11:45	Water Ride	15 10.0	130.0	247.001	224.5	224.5	15	15	0 11.0	
01/01/2018	01/01/2018 11:00	11	01/01/2018 11:15	Top Spin	10 1.0	36.0	288.25	144.25	144.25	15	15	0 2.0	
01/01/2018	01/01/2018 17:00	17	01/01/2018 17:15	Crazy Bus	5 6.0	264.0	353.0	353.0	353.0	15	15	0 6.0	
01/01/2018	01/01/2018 12:15	12	01/01/2018 12:30	Log Flume	50 87.0	173.0	429.5	424.5	424.5	15	15	0 88.0	
01/01/2018	01/01/2018 15:30	15	01/01/2018 15:45	Oz Theatre	10 2.0	80.0	387.5	387.5	387.5	15	15	0 2.0	
01/01/2018	01/01/2018 18:45	18	01/01/2018 19:00	Circus Train	0 1.0	0.0	0.0	0.0	0.0	0	0	0 1.0	
01/01/2018	01/01/2018 11:15	11	01/01/2018 11:30	Giant Wheel	55 3.0	188.0	503.75	302.25	302.25	15	15	0 5.0	



Data available: you also have access to the park's daily overall attendance

USAGE_DATE	FACILITY_NAME	attendance
01/06/2018	PortAventura World	46804
01/06/2018	Tivoli Gardens	20420
02/06/2018	PortAventura World	57940
02/06/2018	Tivoli Gardens	29110
03/06/2018	PortAventura World	44365
03/06/2018	Tivoli Gardens	23727
04/06/2018	PortAventura World	37617
04/06/2018	Tivoli Gardens	15115
05/06/2018	PortAventura World	32438
05/06/2018	Tivoli Gardens	16373
06/06/2018	PortAventura World	28399
06/06/2018	Tivoli Gardens	15831
07/06/2018	PortAventura World	39436
07/06/2018	Tivoli Gardens	16587
08/06/2018	PortAventura World	36459



Data available: The *entity_schedule* dataset contains all information on the **opening**, **closing** and **rehabilitation** works of attractions

REF_CLOSING_DESCRIPTION	ENTITY_DESCRIPTION_SHORT	ENTITY_TYPE	DEB_TIME	FIN_TIME	UPDATE_TIME	WORK_DATE
	Tivoli Gardens	PARK	19/11/2018 10:00	19/11/2018 18:00	20/11/2018 08:24	19/11/2018
	Dizzy Dropper	ATTR	07/04/2022 08:30	07/04/2022 22:04	08/04/2022 08:00	07/04/2022
	Sling Shot	ATTR	28/03/2018 08:37	28/03/2018 18:12	29/03/2018 08:24	28/03/2018
	Gondola	ATTR	11/04/2019 09:55	11/04/2019 20:19	12/04/2019 08:59	11/04/2019
	Monorail	ATTR	29/06/2019 08:30	29/06/2019 20:35	30/06/2019 08:14	29/06/2019
Fermeture Réhab	Top Spin	ATTR	07/04/2019 23:59	07/04/2019 23:59	08/04/2019 07:40	07/04/2019
	PortAventura World	PARK	17/07/2018 08:30	17/07/2018 09:30	18/07/2018 07:48	17/07/2018
	Skyway	ATTR	13/12/2019 08:23	13/12/2019 18:02	14/12/2019 07:59	13/12/2019
	Sling Shot	ATTR	21/07/2018 08:33	21/07/2018 20:13	22/07/2018 07:46	21/07/2018
	Gondola	ATTR	11/11/2019 09:00	11/11/2019 18:22	12/11/2019 07:18	11/11/2019
	Tivoli Gardens	PARK	19/04/2019 08:30	19/04/2019 09:30	20/04/2019 07:43	19/04/2019
	PortAventura World	PARK	28/02/2019 08:30	28/02/2019 09:30	01/03/2019 09:23	28/02/2019
Fermeture Réhab	Kiddie Coaster	ATTR	21/02/2018 23:59	21/02/2018 23:59	22/02/2018 08:36	21/02/2018
	PortAventura World	PARK	18/08/2019 08:30	18/08/2019 09:30	19/08/2019 07:34	18/08/2019
Fermeture Opérationnelle	Oz Theatre	ATTR	04/09/2018 23:59	04/09/2018 23:59	05/09/2018 08:12	04/09/2018
	PortAventura World	PARK	05/02/2020 10:00	05/02/2020 19:00	06/02/2020 08:09	05/02/2020
	Free Fall	ATTR	04/01/2020 08:11	04/01/2020 18:15	05/01/2020 07:52	04/01/2020
	Tivoli Gardens	PARK	04/05/2018 08:30	04/05/2018 09:30	05/05/2018 11:16	04/05/2018
Fermeture Opérationnelle	Oz Theatre	ATTR	24/06/2018 23:59	24/06/2018 23:59	25/06/2018 08:03	24/06/2018
	Giga Coaster	ATTR	08/04/2019 09:25	08/04/2019 21:00	09/04/2019 07:45	08/04/2019
	Tivoli Gardens	PARK	29/01/2020 08:30	29/01/2020 09:30	03/02/2020 15:22	29/01/2020
	Inverted Coaster	ATTR	15/09/2018 09:55	15/09/2018 18:20	16/09/2018 08:38	15/09/2018
	Himalaya Ride	ATTR	05/06/2018 10:00	05/06/2018 23:00	06/06/2018 07:27	05/06/2018
	Water Ride	ATTR	02/05/2019 08:30	02/05/2019 21:14	05/06/2019 09:12	02/05/2019



Data available: The hourly weather at the park was also made available

dt_iso	temp	visibility	feels_like	temp_min	temp_max	wind_gust	rain_1h	rain_3h	snow_1h	snow_3h	clouds_all	weather_main	weather_description	weather_icon
1999-01-01 00:00:00 +0000 UTC 8.33	5.28	8.14	9.32								8	Clear	sky is clear	01n
1999-01-01 01:00:00 +0000 UTC 8.08	5.18	7.94	9.32								6	Clear	sky is clear	01n
1999-01-01 02:00:00 +0000 UTC 8.08	5.38	7.94	8.74								14	Clouds	few clouds	02n
1999-01-01 03:00:00 +0000 UTC 7.31	4.42	7.14	8.62								39	Clouds	scattered clouds	03n
1999-01-01 04:00:00 +0000 UTC 6.91	4.0	6.74	8.32								52	Clouds	broken clouds	04n
1999-01-01 05:00:00 +0000 UTC 5.45	2.35	4.6	7.32								52	Clouds	broken clouds	04n
1999-01-01 06:00:00 +0000 UTC 5.63	2.57	4.6	7.62								57	Clouds	broken clouds	04n
1999-01-01 07:00:00 +0000 UTC 5.64	2.38	3.6	7.32								65	Clouds	broken clouds	04n
1999-01-01 08:00:00 +0000 UTC 5.99	2.69	4.6	6.94								61	Clouds	broken clouds	04d
1999-01-01 09:00:00 +0000 UTC 6.72	3.42	5.6	7.97								83	Clouds	broken clouds	04d
1999-01-01 10:00:00 +0000 UTC 7.01	3.97	5.6	8.77								89	Clouds	overcast clouds	04d
1999-01-01 11:00:00 +0000 UTC 9.41	7.22	8.6	11.77								92	Clouds	overcast clouds	04d
1999-01-01 12:00:00 +0000 UTC 10.98	10.14	10.6	11.47								73	Clouds	broken clouds	04d
1999-01-01 13:00:00 +0000 UTC 10.8	9.92	10.6	12.32								32	Clouds	scattered clouds	03d
1999-01-01 14:00:00 +0000 UTC 12.09	11.34	11.32	12.77								52	Clouds	broken clouds	04d
1999-01-01 15:00:00 +0000 UTC 11.6	10.83	10.92	11.94								42	Clouds	scattered clouds	03d
1999-01-01 16:00:00 +0000 UTC 10.38	9.61	8.77	10.94								32	Clouds	scattered clouds	03d
1999-01-01 17:00:00 +0000 UTC 9.69	7.88	8.32	9.94								8	Clear	sky is clear	01n
1999-01-01 18:00:00 +0000 UTC 7.93	5.59	6.07	8.6								8	Clear	sky is clear	01n
1999-01-01 19:00:00 +0000 UTC 7.69	5.29	6.74	8.32								19	Clouds	few clouds	02n
1999-01-01 20:00:00 +0000 UTC 6.8	4.17	6.6	7.32								79	Clouds	broken clouds	04n
1999-01-01 21:00:00 +0000 UTC 6.56	3.86	6.14	6.72								100	Clouds	overcast clouds	04n
1999-01-01 22:00:00 +0000 UTC 5.91	2.97	5.74	6.32								98	Clouds	overcast clouds	04n
1999-01-01 23:00:00 +0000 UTC 5.91	2.8	5.74	6.32								94	Clouds	overcast clouds	04n
1999-01-02 00:00:00 +0000 UTC 5.78	2.29	5.44	6.32								100	Clouds	overcast clouds	04n
1999-01-02 01:00:00 +0000 UTC 5.91	2.2	5.74	6.32								100	Clouds	overcast clouds	04n
1999-01-02 02:00:00 +0000 UTC 6.74	3.04	5.74	7.32								100	Clouds	overcast clouds	04n
1999-01-02 03:00:00 +0000 UTC 6.64	2.74	6.64	6.92								100	Clouds	overcast clouds	04n
1999-01-02 04:00:00 +0000 UTC 6.91	2.94	6.74	7.32								100	Clouds	overcast clouds	04n

AGENDA



1. About eleven
2. Structure of a commercial exchange
3. Case presentations
 - a) Your Next Purchase
 - b) The Endless Line
4. General information
 - a) Expected output
 - b) Practical information

Expected output: how should you structure a commercial exchange?

Reminder

You are expected to deliver the following:

- Your code used to solve the use case, including any relevant dashboard, data analysis, model training, etc. This code should be readable by anyone, with a clear *Readme*, *requirements*, potential *quickstart.py*, etc.
- A “client-ready” PowerPoint presentation of your work, structured as follows:

1

Context & Objectives: what do you understand from the project? Why is the context very complex?



- ✓ Present your understanding of the situation
- ✓ Include the process, the needs, the potential ROI, etc.

➤ c. 2/3 slides

2

Key Success Factors: what would be the reason of your success?

KSF	WHY?	HOW?
Business oriented		
Hands-on approach		
etc.		

- ✓ Explain the reasons of success: strong interaction with client? Deep expertise in AI?

➤ c. 1 slide

3

Proposed methodology: what could you do for the potential client?

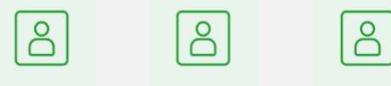


- ✓ What you could do, how, what you have already done, any relevant insight to prove your expertise and how much time do you need for the mission!

➤ c. 6/8 slides

4

Team: who are you and what have you done? Why are you relevant to solve the case?



- ✓ Introduce yourself, your background and explain why you are relevant for this mission

➤ c. 1 slide

For illustration



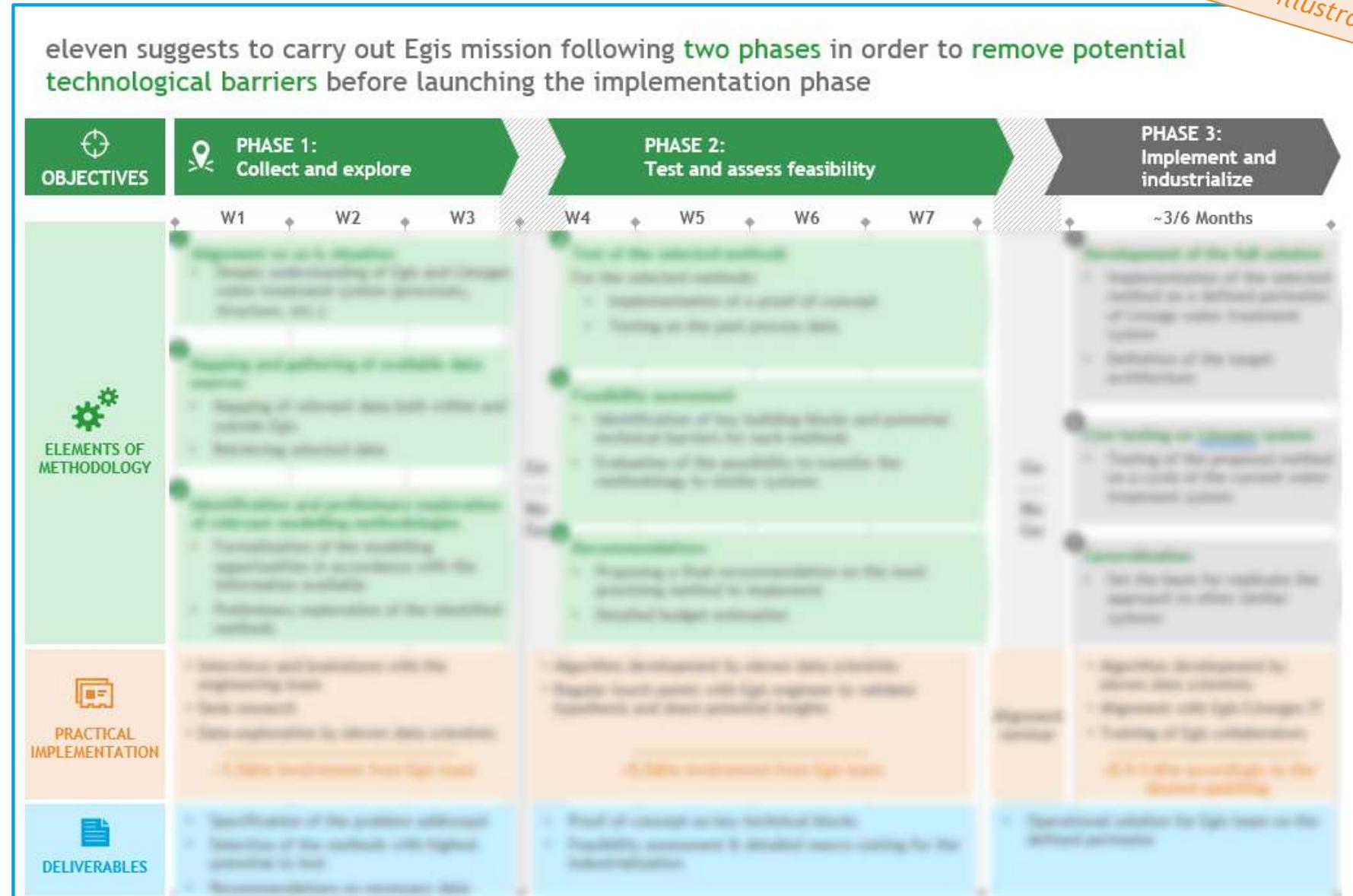
2 Key Success Factors: example of potential output

For illustration

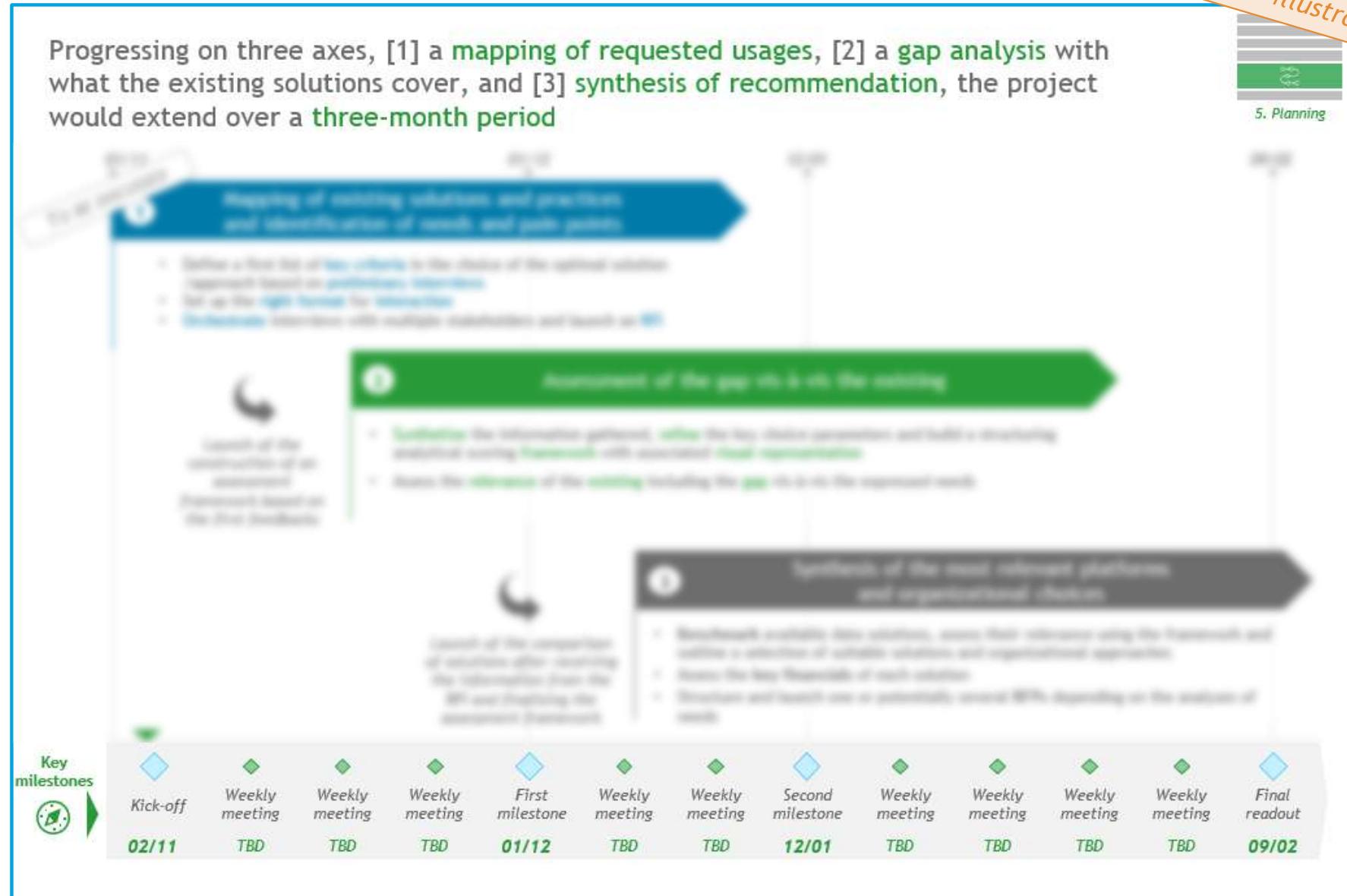
Based on past experiences, eleven has identified **five key success factors** to successfully launch a first AI initiative

KEY SUCCESS FACTORS	WHY?	HOW?
1 FOLLOW A BUSINESS-ORIENTED ADOPTION OF AI		
2 ONBOARD THE TEAMS AND BUSINESS STAKEHOLDERS EARLY		
3 MASTER AI TOOLS AND METHODOLOGY		
4 START SMALL THEN ITERATE		
5 FOLLOW A HANDS-ON APPROACH		

Proposed methodology: example of potential output - Detailed roadmap



Proposed methodology: example of potential output - Detailed roadmap



For illustration



6. Approach

The **approach** is structured around **three complementary axes** leading to several **deliverables** at each step of the project

eleven's suggested approach



For illustration



AGENDA



1. About eleven
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Schedule for the five days: the timing may be short, do not hesitate to split the work between the members of the team



For illustration

	Monday 10 th	Tuesday 11 th	Wednesday 12 th	Thursday 13 th	Friday 14 th
AM session	<p>Kick-off (9:00 am)</p> <p>In-depth understanding & Q&A (Room PAR 6-7) <i>We will move between the groups to answer the different questions and help you structure the case study</i></p>	<p>Business</p> <ul style="list-style-type: none"> ✓ Present your team and your relevance for the mission ✓ Describe the value chain of the client and identify the potential untapped levers and/or pain points <p> Data </p> <ul style="list-style-type: none"> ✓ Start data exploration and cleaning ✓ Confirm analyses to be led or models to be used (e.g., define target variable, metrics etc.) 	<p>Business</p> <ul style="list-style-type: none"> ✓ Work on the story-line of your commercial proposal ✓ Start brainstorming about possible usage of your solution for the client <p> Data </p> <ul style="list-style-type: none"> ✓ Keep building relevant features ✓ Build more advanced models ✓ Select evaluation metrics and setup an hyperparameter optimization pipeline 	<p>Business</p> <ul style="list-style-type: none"> ✓ Rehearse your pitch to make it impactful ✓ Be prepared with all your speakers knowing their part <p> Data </p> <ul style="list-style-type: none"> ✓ Finalize your dashboard ✓ Clean your code and write a doc 	<p>Q&A business (remote)</p> <ul style="list-style-type: none"> ✓ Slack
PM session	<p>Business</p> <ul style="list-style-type: none"> ✓ Ensure your understanding of the value chain of the potential client ✓ Split the work between the team <p> Data </p> <ul style="list-style-type: none"> ✓ Collect and explore the data ✓ Validate the analysis you would like to perform with the provided data <p><i>Start sliding quickly, last minute slides could lead to poor final work quality</i></p>	<p>Business</p> <ul style="list-style-type: none"> ✓ Identify the Key Success Factors ✓ Start working on the methodology you could use to deliver a solution <p> Data </p> <ul style="list-style-type: none"> ✓ Train a baseline model ✓ Build relevant features <p>Q&A tech (remote)</p> <ul style="list-style-type: none"> ✓ Slack 	<p>Business</p> <ul style="list-style-type: none"> ✓ Synthesize the preliminary results of the model ✓ Start evaluating the added-value your solution could provide to your potential client <p> Data </p> <ul style="list-style-type: none"> ✓ Start building a dashboard to present your results ✓ Keep enriching and optimizing your models 	<p>Business</p> <ul style="list-style-type: none"> ✓ Finish gathering preliminary insights from your models and deduce preliminary recommendations ✓ Finalize structuring your story-line <p> Data </p> <ul style="list-style-type: none"> ✓ Take a step back: evaluate the quality of your models, and select the most appropriate one ✓ Keep building the dashboard 	<p>Final Pitch (9:00 am) (Room PAR 6-7 & 14)</p> <ul style="list-style-type: none"> ✓ Be sure your slides are "client-ready" ✓ Upload both final presentation and final code ✓ Planning on slack <p>Closing Session (2:00 pm) (Room PAR 6-7)</p> <p>Cocktail (2:30 pm - PAR 6-7)</p>

: Paris campus

: Remote

Detailed schedule for the pitch sessions



Pitch sessions

Pitch sessions (PAR 13-14) - Friday 14th	
Your Next Purchase (Room PAR 6-7)	The Endless Line (Room PAR 14)
9am-9:20am	Team 1
9:20am-9:40am	Team 2
9:40am-10:00am	Team 3
10:00am-10:10am	Team 4
10:10am-10:30am	Team 5
10:30am-10:50am	Team 6
10:50am-11:10am	Break
11:10am-11:20am	Break
11:20am-11:40am	Team 7
11:40am-12:00am	Team 8
12:00am-12:20am	Team 9
12:20am-12:40am	Team 10
	Team 11
	Team 12
	Break
	Break
	Team 13
	Team 14
	Team 15
	Team 16
	Team 17
	Team 18
	Team 19
	Team 20

Provisional
schedule **

** Time slots and groups repartition may be updated during the Hackathon: any change of time will be notified on Slack

Final presentation details and best practices:

On Friday 14th, you will have to present your work in front of a **jury** during a **closed-door session**

The modalities of the presentation will be as follow:

- **10min group pitch** based on a PowerPoint presentation
- **~5min Q&A session** with the jury
- **~5min debrief** from the jury

For each case, a winner will be announced. The two winner groups will then **present their work to the other students** (same modalities with questions from the students)

The presentation must be **as professional as possible**. Here are some advices and best practices that may be useful:



- **Structure your presentation:** start by stating the problem that you want to solve, then present the way you tackled it, and finally describe your solution. The “story” of the presentation should be natural and easy to follow
- **Be concise and precise:** focus on the most important messages, as you only have 10 minutes to present the work achieved. You should limit the number of slides you present (you can still add appendices if needed)
- **Be organized as a team:** split up the speaking time between the team members beforehand to make it smoother
- **Be honest:** tell where you encountered issues or challenges
- **C-suite level:** you should convince both the CEO and the CTO/CDO of the company

Evaluation criteria:

Although different in their essence, the cases will be graded based on **similar criteria**.

NB: any **provided code** will be tested in order to confirm its good functioning.

**The contribution of each criteria may not reflect the actual value of each step for a commercial exchange*

	Topic	Description	Contribution to the final grade*
Business aspect	Engagement	The engagement of the team during the exercise (how far you've gone, how autonomous you have been, how much you have asked questions when stuck, etc.)	2 points
	Presentation quality	The quality of your final presentation : how professional it looks (slide quality), how clear and complete it is (storytelling), how pertinent your answers are, etc.	3 points
	Business methodology	The creativity and relevance of the methodology (i.e., scientific approach) you choose regarding the problem you try to solve, and the data provided, the business sense behind your methodology and the pragmatism of your presentation	6 points
Technical aspect	Technical choices	The explanation of your technical choices and your ability to present them in non-technical terms	3 points
	Model efficiency or Analysis relevance	The performance of your model (specific to each case), the relevance for the problem in question , the quality of the analysis led	5 points
	Code good practices	Your code must be well structured , easy to run and easy to understand with clear readme and requirements.	1 point

Please note that all groups will be graded at the end of the week

The Slack workplace

For this challenge, we opened a **Slack workplace** for you to ask your questions when eleven consultants are not on campus

On this workplace, you will find three channels:

- 1) **#general**: for all questions and information related to the organization of the challenge
- 2) **#case-1-your-next-purchase**: for all questions specifically related to *YourNextPurchase* case
- 3) **#case-2-the-endless-line**: for all questions specifically related to *TheEndlessLine* case

Additional information may also be pinned in these channels (schedules, classroom numbers, etc.)

Please use the right channel to ensure fluidity of the interactions

Before asking something, also make sure that the requested information has not been given already ;)



Scan to join
or use [the link](#)

You may download the slack application on your device or access it via your usual browser

Download instructions & submission process

How to download datasets?

You can **download datasets** and potential additional information **at the following links:**

- Case #1: YNP - [get your files here](#)

Antoine DARGIER > Bureau > RelationEcoles > Hackathon DSBA 2025			
Nom	Modifié	Modifié par	Ajouter une colonne
attendance.csv	Il y a 2 heures	Pierre LAVIEILLE	
entity_schedule.csv	Il y a 2 heures	Pierre LAVIEILLE	
glossary.xlsx	Il y a 2 heures	Pierre LAVIEILLE	
link_attraction_park.csv	Il y a 2 heures	Pierre LAVIEILLE	
parade_night_show.xlsx	Il y a 2 heures	Pierre LAVIEILLE	
waiting_times.csv	Il y a 2 heures	Pierre LAVIEILLE	
weather_data.csv	Il y a 2 heures	Pierre LAVIEILLE	

- Case #2: TEL - [get your files here](#)

Antoine DARGIER > Bureau > RelationEcoles > Hackathon DSBA 2025	
clients.csv	✓
products.csv	✓
stocks.csv	✓
stores.csv	✓
transactions.csv	✓

How to submit your works?

Each group will receive a **link by email** with a **Sharepoint folder** to submit their assignment (both Presentation + Code)



Notes:

- You can organize your folder as you wish.
- You can keep old files that should not be submitted to the jury in a *O_Archives* folder



Now is your turn!

- ✓ Find your groups of 5/6 people and choose a subject
- ✓ Put yourself in a data consultant's shoes: start structuring your approach and start exploring the data
- ✓ We will be here until 1: 00 pm to validate your approach and answer your questions



Antoine, coach for
« Your Next Purchase »



Simon, coach for
« The Endless Line »

Enjoy the challenge!