09.2022 — 01.2023

report POCH
PROGRAMA OPERACIONAL CAPITAL HUMANO

POCH-04-5267-FSE-000821
course_'learning based on co-creation processes'

topic design projet   my demola team

cities of the future will be powered by big data and AI

17 oct / 16 dec 2022

contents

about me

since 2000, he has been conciliate his professional activity with teaching in higher education.
he is eternally curious about design and advertising and passionate about the art of teaching.
received a degree in communication design from the college of fine arts at the univ. of the port,
in the year 2000. in 2007, at the same college, he completed a master's degree in multimedia art
with the project "non-places in the city of porto". in 2012, he began his doctoral adventure in art
and design.

at caetsu, as a creative, in 2001 he participated for the first time in the ccp (creative club
of portugal), with the poster-campaign: "add attachment", winning an honorable mention
(advertiser: sagres).
the next year, with a new participation, it won first prize, with the poster-campaign: "it's never
too late to be yorn" (advertiser: yorn).
the next year, with a new participation, it won first award, with the poster campaign "it's never
too late to be yorn" (advertiser: yorn).

professional context he worked on several brands, namely toyota, bmw, lexus, mini, metro do
porto, sic tv, ge money, salvador caetano group, apcor, edge douro cafes, essence of wine,
timberland , portuguese aeg, apn, popular radio, continental tires, molaflex, etc.
for several years he worked as a designer and creative at caetsu.
he was art director for several years at qa publicidade (porto).
he was a professor for several years at est and esd at ipca (barcelos).

on december 21, 2022, he obtain the title of specialist in audio-visuals and media production, the
final classification was unanimous: approved with distinction.
currently he's the creative director at ITI (VN Giaia) and teacher at ipvc and ipmaia (portugal).

**In this demola project, I assumed the role as a facilitator, it was crucial the process to monitoring,
guiding and motivating students.**
good ideas don't fall from the sky.

porfolio – 305design.pt
linkedin – linkedin.com/in/305vitortavares
ciência vitae – cienciavitae.pt/portal/0610-278b-c14c

design research

topic dedign projet

CITIES OF THE FUTURE WILL BE POWERED BY BIG DATA AND AI

- 👥 Membership (3)
- 📝 Contracts
- ☰ Tasks (13)
- 😊 Evaluations
- 👤 Results

Starts on
17/10/2022
Ends on 16/12/2022

DEMOLA projet
completed

main initials questions

The key to cities of the future will be powered by big data and AI?
How will AI transform smart cities?
We need (re)think all things about the future of cities and we should aspire to a better quality of life in our cities, like a dream with a perfect city.
Artificial intelligence (AI), robots and data software will be the answer to creating a new approach to planning the cities of the future?

topic submitted: 28.09.2022

demola team project

SELECTED TEAM MEMBERS

get list   + add student

PEDRO RIBEIRO
pedroamaral@ipvc.pt
+351965473482
Team participation: (Confirmed!)

DIOGO AMARAL
diogo.amaral@ipvc.pt
+351934444237
Team participation: (Confirmed!)

ISIS PINTO
isismadalena1973@gmail.com
+351914780130
Team participation: (Confirmed!)

my team students

CURRENT ACCESS TO RESULTS ⌄

PEDRO RIBEIRO
Can see results in Demola Portal
certificate public link

DIOGO AMARAL
Can see results in Demola Portal
certificate public link

ISIS PINTO
Can see results in Demola Portal
certificate public link

ALLOW ACCESS TO RESULTS ⌄

All team members already have a certificate.

ipvc estg   DEMOLA   K KAMK · University of Applied Sciences   POCH   PORTUGAL 2020   UNIÃO EUROPEIA Fundo Social Europeu

methodology work

every weeks the team met on fridays online in demola chat (18:30-20:00 pm) to move forward with the project, discuss and share ideas/questions to work and respond proposed tasks week by week in demola.
these meetings was fruitful and crucial for improuvement, conclusion and materialization of the idea prototype and conclusion of the final report of this.
the results grew naturally, because i felt as a facilitator that the team was highly motivated with the theme of the project.

empathy maps task

Team: Cities of the future will be powered by big data and AI - Empathy Map

Bibliography

Full name: Elon Reeve Musk
Occupation: Entrepreneur and investor
Place of Birth: Pretoria, South Africa
Date of Birth: June 28, 1971
Fortune: $24.5 billion (2019 Forbes ranking)

Male
Age 51
Programmer
Living in the United States
Entrepreneur and investor
Tesla; Neuralink; Paypal; Space X: Twitter
Graduated in economics and physics

SAYS
"Artificial intelligence threatens the existence of our civilization"
"All organizations developing advanced AI should be regulated"

THINKS
Artificial intelligence and machines could destroy humanity.
Electric Cars help Against Pollution

DOES
Works on space exploration and smart cars projects
Contributes to AI studies.
Manufactures batteries, electric car charging networks and produces solar panels to power the power grid.

FEELS
Worries about human extinction
Hates public transport

Elon Musk

GOALS
Expand the human presence by the Solar System
Colonize Mars
He wants humans to be able to keep up with the development of machines and not be dominated by them.

Name of the user group	Elon Musk.
Feel	Worries about human extinction. Hates public transport.
Think	Electric Cars help Against Pollution. Artificial intelligence and machines could destroy humanity.
Say	"All organizations developing advanced AI should be regulated" "Artificial intelligence threatens the existence of our civilization"
Do	Works on space exploration and smart cars projects. Contributes to the study of AI. Manufactures batteries, electric car charging networks and produces solar panels to power the power grid.

this task was crucial to do the project topic design.
team worked on space exploration and smart cars projects to generate contributions to study solutions/ ideas to cities of future powered by big data an AI.

speculative design

signals

the various signals found in the creative process with students to research design, were relevant to move forward to the next step of the demola project idea.

Name	Type	Context	Origin	Reactions	Comments	More
Contact with nature	change	behavioral change	personal perception or insight	○	○	
The future of climate technology	warning	technology	observation/interview	○	○	
Indoor Employment MORE	opportunity	behavioral change	news/publication/other	○	○	
CROSS-BORDER WORKER	change	business	news/publication/other	○	○	
inner appreciation program	solution/idea	behavioral change	news/publication/other	○	○	
Automated guided vehicles and robotic drones	solution/idea	technology	news/publication/other	○	○	
URBAN PLANNING SUSTAINABLE	problem	environment	data analysis	○	○	
Sponge Cities	solution/idea	environment	news/publication/other	○	○	
STEM education	change	environment	observation/interview	○	○	
Business Directories	change	environment	news/publication/other	○	○	

future questions

what if...?
- private cars will be banned from center of cities?
- autonomous types of transportation will be the only allowed in the center of cities?
- an algorithm controls all the traffic of autonomous types of transportation?

how might we...?
- introduction of congestion and parking charges to internalise the negative impacts of private transport

future stakeholders personas

name of the future persona:
- delivery goods is a crescent trend;
- each city has it own delivery services that are paid with fees charged to regional/ national/international delivery companies;
- each defined area of the city has it dedicated module to the deliveries that work as a pick-up point as well (fees of deliveries are adapted for which service citizen chooses);
- each model has parking spots in each area and the module (algorithm) chooses the midpoint adapted to the deliveries addresses.

changes inthe future persona:

SKILLS:
- no need of delivery workers.
- better and suitable delivery by pick up or home delivery at best hour to costumers with a enlarge schedule.
- more versatile service.

BEHAVIOR:
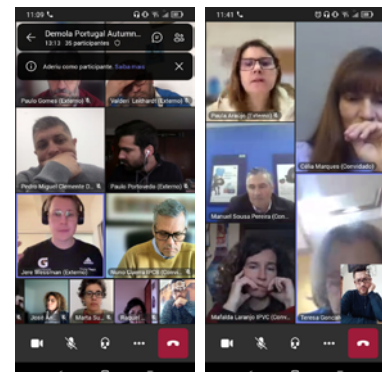- no one need to be at home at certain hour to a sucesseful delivery;
- citizens will have a more confortable way of delivery;
- it is expected that this can promote more walking time to citizens, charging more the door delivery compared to picku-up delivery;
- better and suitable delivery by pick up or home delivery at best hour to costumers with a enlarge schedule.
- more versatile service.

VALUES:
- city earns fees/taxes to service maintenance and it is expected to have an extra to governance/infrastrutures (working like a frees tourism).

bootcamps and online meetings

the bootcamps meetings at beja (ipb) and viseu (essv) were really relevants, and all weekly online meetings with the trainer Demola were fruitful and productive.

sharing of ideas, new questions, new themes, new knowledge's in different areas with other colleagues (facilitators), **some poins of view**:

– first of all to allow teachers to know each other;

– identify the main ideas for potencial work;

– connect and make network between teachers from different polytechniques;

– share knowledges and new experiences.

project idea (prototype)
concept idea

Concept Matrioska

autonomous public transport that initially would be a single module, and as it was filling up and reaching maximum capacity would increase another module, being able to repeat this process several times up to a maximum number of modules.
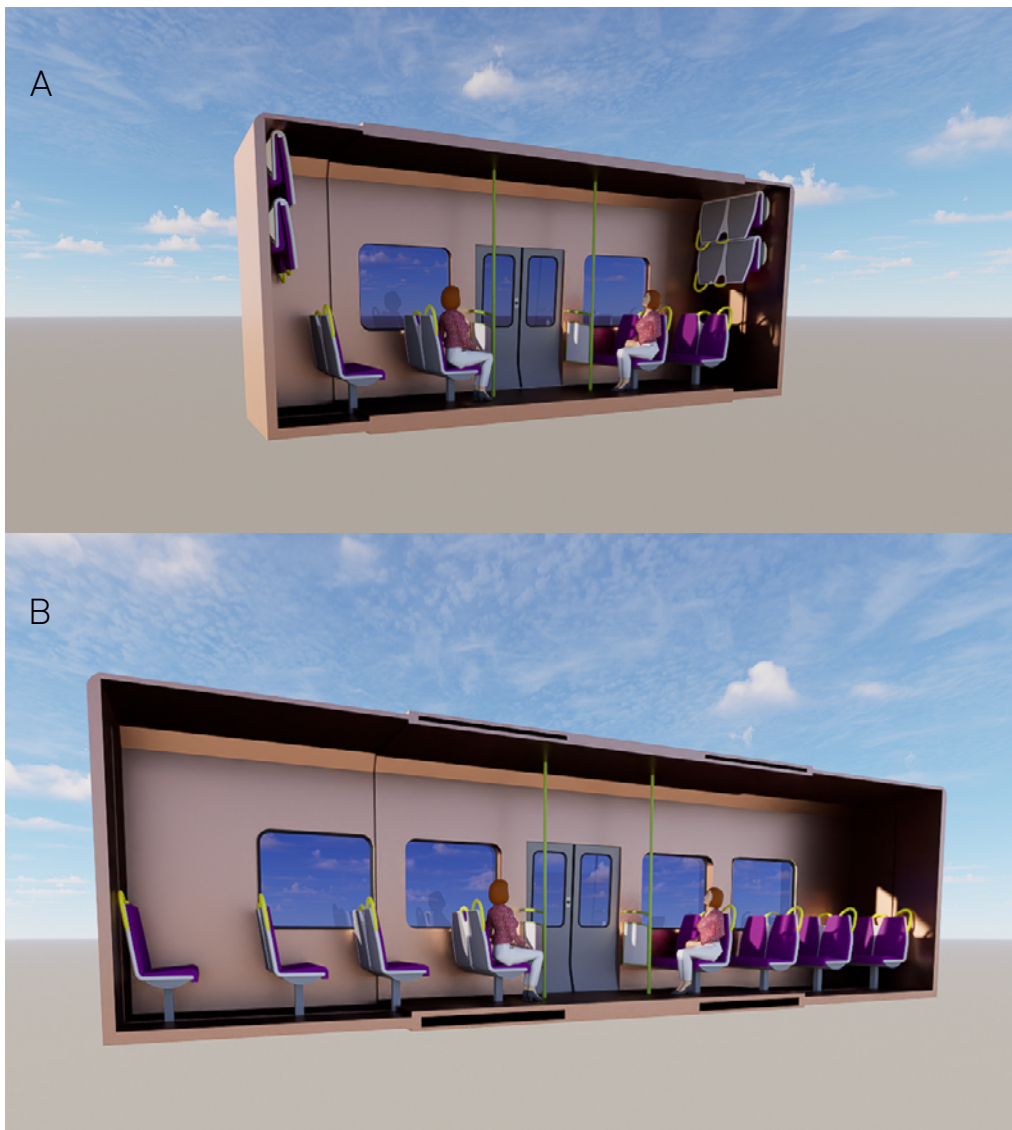at the end of their journey as people left the transport, it would collect the modules, returning to being one.

the idea is to create a public transportation system that automatically adjusts its size and capacity based on the number of passengers it needs to pick up and the route and the route it is going to go. this would allow for more efficient use of road space and reduce the amount of empty or overcrowded vehicles on the road.
for example, if the system detects that is approaching a busy stop with a high number of passengers waiting, it could automatically expand to accommodate more passengers. similarly, if the system detects a less crowded stop, it could automatically retract to save space and reduce the number of empty seats. this type of system would be managed by an algorithm that constantly monitors the number of passengers and adjusts the size of the vehicle accordingly. the algorithm also considers factors such as the height and width of the street, the presence of other vehicles and pedestrians, and any potential obstacles or hazards. by constantly monitoring and adjusting its size to optimize the route and make adjustments to improve efficiency.
this type of autonomous public transportation system could improve the reliability and efficiency of public transportation in cities.
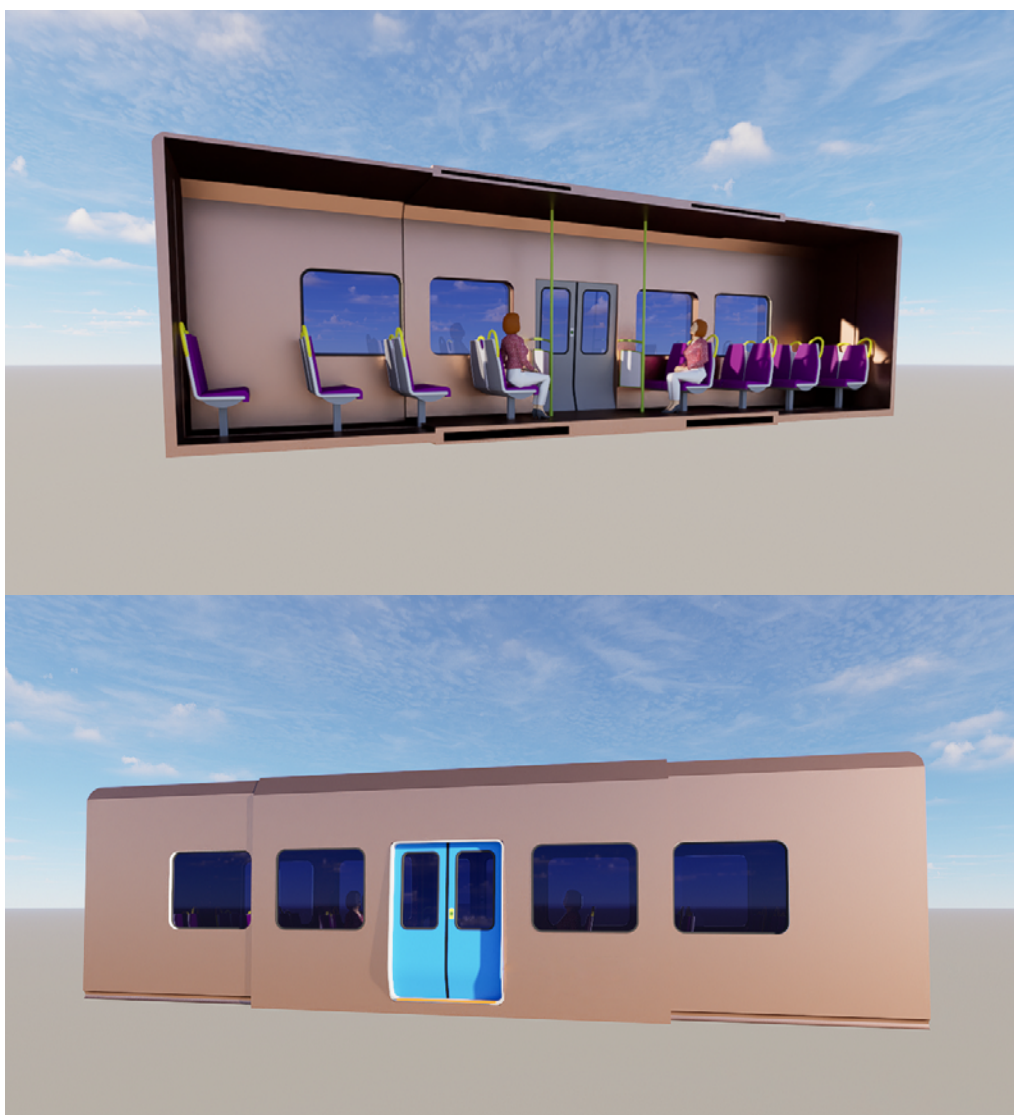
project idea (prototype)

A

B

with this project we concluded that there is many issues to be solved for a more efficient and fluid mobility in the future cities. the private car stills as the main way of mobility and that needs to be stopped. the adaptation of the present cities for smart cities are a process that needs will and courage in some way. the technology also needs to be improved for autonomous mobility being totally safe and being safe the application of our thoughts and ideas. big data and ai are improving every day but stills a needed path to assume the big role in this theme.
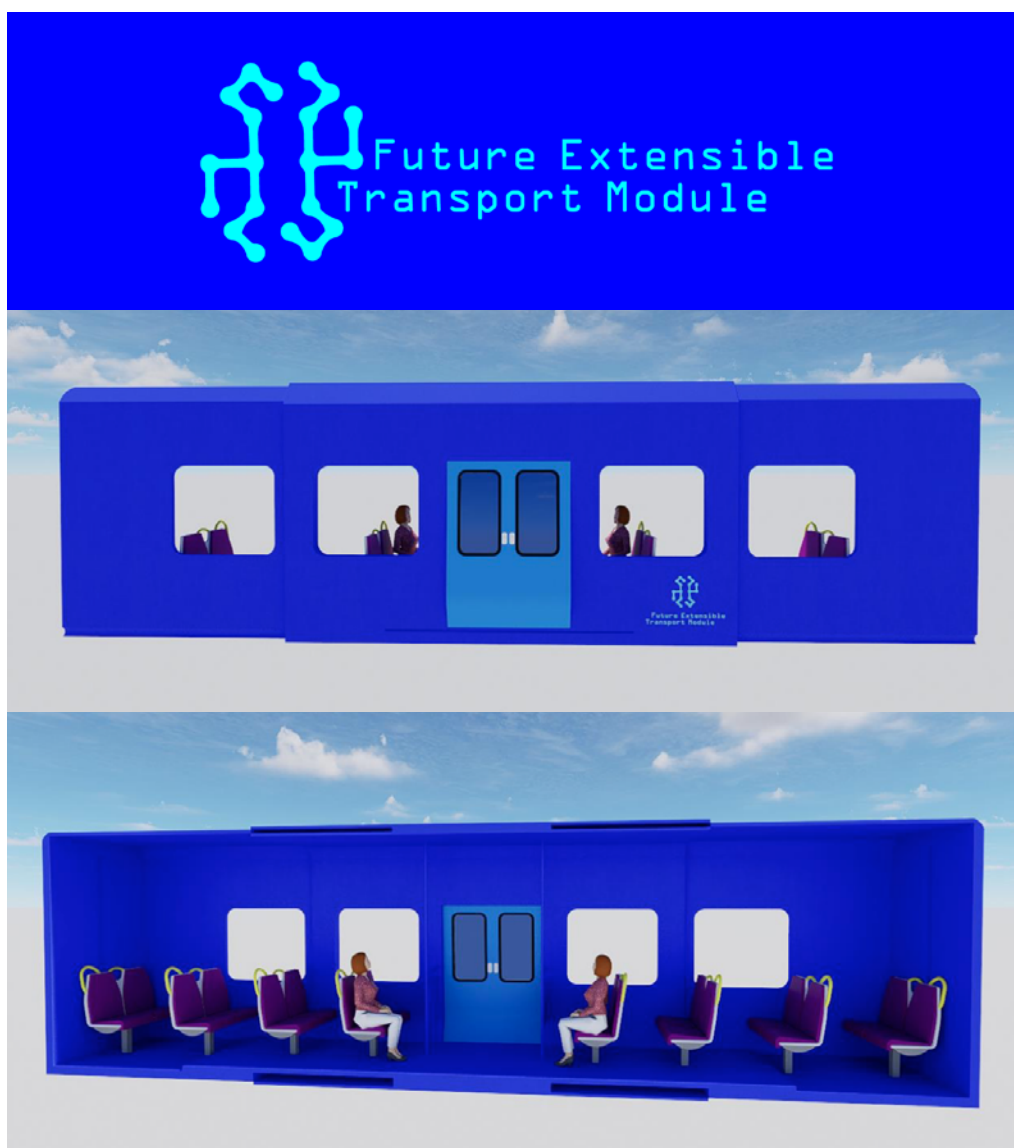
prototype idea

prototype (naming/logo & 3D)

Future Extensible Transport Module

conclusions/reflections

first of all, as a facilitator what i did learn about demola project?
- team work
- news experiences
- learn to listen / open to listen
- learn new methodology in design research and design speculative
- news points of views
- team confidence
- improvement knowledge about big data and AI

what i like to do?
solve problems for mobility in cities of the future with big data and ai, for that it was necessary create empathy maps group and think relevant prototype ideas.
this project is about creating something new .

main goals achieved:
make the team create feel authonomy and confidence work.
imerge your creative liberty and **make idea happen.**

(vítor tavares teixeira)

viana do castelo, ipvc.
26 jan 2023

6_

final pitch - ipvc

my team was in 2nd place final pitch at ipvc
viana do castelo (4th edition), 20.01.2023.

ipvc — Instituto Politécnico de Viana do Castelo / Link me up

Sessão PITCH FINAL da 4ª edição do projeto Link Me Up 1000 ideias - dia 20 jan 2023

Resultados finais

	Médias por parametros	Média Final
Digital and data new age		
Clareza da comunicação	3,4	
Criatividade na apresentação	3,2	
Apresentação robusta dos resultados	3,4	
Argumentação	3,3	
Grau da inovação dos resultados/diagnóstico apresentados	3,6	
		3,38
Sustainnability, Communication and semantic data		
Clareza da comunicação	3,4	
Criatividade na apresentação	3	
Apresentação robusta dos resultados	3,4	
Argumentação	3,9	
Grau da inovação dos resultados/diagnóstico apresentados	3,5	
		3,44
New Branding for Eurocities		
Clareza da comunicação	3,5	
Criatividade na apresentação	3,2	
Apresentação robusta dos resultados	3,7	
Argumentação	3,74	
Grau da inovação dos resultados/diagnóstico apresentados	3	
		3,428
Couloring Cities		
Clareza da comunicação	3,7	
Criatividade na apresentação	4,4	
Apresentação robusta dos resultados	3,9	
Argumentação	4,1	
Grau da inovação dos resultados/diagnóstico apresentados	3,7	
		3,96
Future cities will be powered by BD and AI		
Clareza da comunicação	3,4	
Criatividade na apresentação	2,9	
Apresentação robusta dos resultados	3,66	
Argumentação	3,7	
Grau da inovação dos resultados/diagnóstico apresentados	4,1	
		3,552
Science and Art for sustainable rural areas		
Clareza da comunicação	3,4	
Criatividade na apresentação	3,2	
Apresentação robusta dos resultados	2,9	
Argumentação	3,2	
Grau da inovação dos resultados/diagnóstico apresentados	2,8	
		3,1

Viana do Castelo, 20 de janeiro de 2023

Teresa Gonçalves

ipvc estg DEMOLA K KAMK · University of Applied Sciences

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kamk university certificate

CERTIFICATE
OF ACHIEVEMENT

PROUDLY PRESENTED TO

Vítor Teixeira

for completing 8 credit course
Professional Development Training Program on Demola Co-Creation Facilitation.

Kajaani 02.03.2023

MATTI SARÉN, RECTOR
Kajaani University of Applied Sciences

KAMK • University
of Applied Sciences

The studies are measured in credits (cr) according to the European Credit Transfer and Accumulation System (ECTS).
A student's average study effort of 27 hours corresponds to 1 credit.

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feedback demola
by joonas kemppainen
22/02/2023

(vítor tavares teixeira)

viana do castelo, ipvc.
26 jan 2023