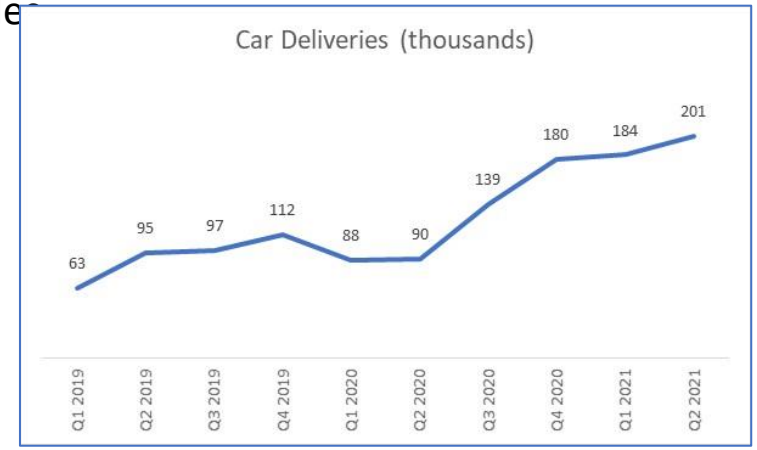
Agenda

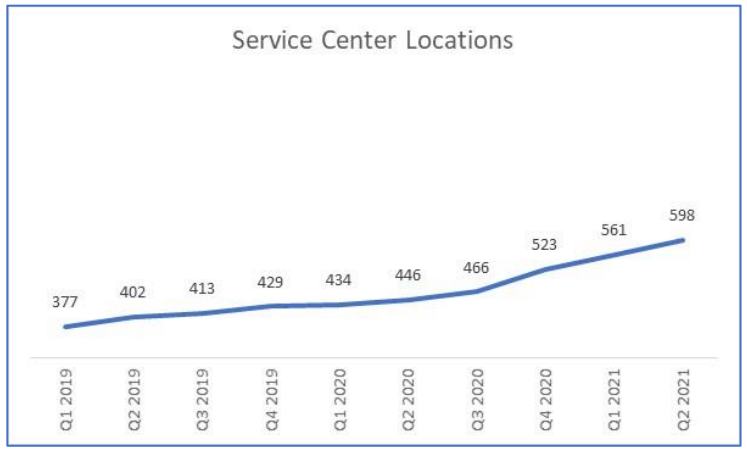
1. Current Situation
2. Problem Identification
3. Problem definition and Strategy
4. Detailed process for ‘touchless’ experience
5. Potential problems – Risks
6. Financial Analysis
7. Requirement's prioritization
8. Conclusions
9. Recommendations

1. Current Situation

Car company Cars deliveries (Sales) had been increasing steadily in the last years. In Q2 2021 there's been a peak of 201K sales



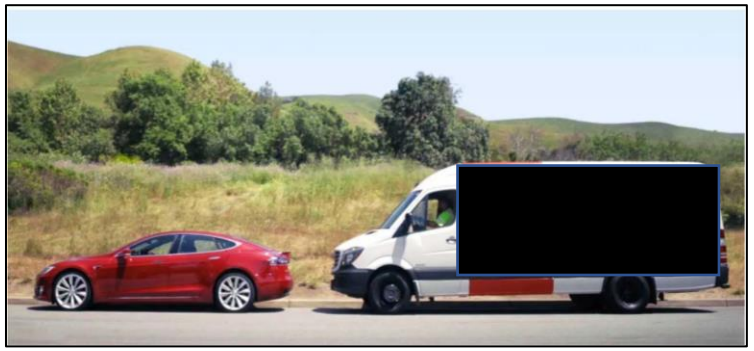
..The Amount of service center, nevertheless, has no increase in the same pace



In order to get in pace with the peaks in sales, Car company Service team has made huge efforts during the last years:

Mobile APP service appointments

Mobile Service 'Car company Rangers'



More Service Center

2. Problem Identification

To identify the problem/ main problems from our customers in the service center / rapair process, is important to understand the customer Journey and identify pain points in each phase.

	Mobile APP Appointment					Prepare visit		Service Center Visit			Pickup Car	
Activity	**Client select type of service**	**Client fill comments and photos.**	**Client select service center.**	**Client selects a time for its appointment**	**Client confirms its appointment.**	**Client Approve cost estimate**	**Client drives to appointment**	**Client arrives service / Check in**	**Client waits in Service center**	**Client leaves service center w/leased car**	**Client has to commute to Service Center**	**Client receive its car**
Touch Point	Car company Mobile APP	Car company Mobile APP	Car company Mobile APP	Car company Mobile APP	Car company Mobile APP	Car company Mobile APP	Car company Mobile APP	Advisor APP	company Center / waiting room	Car company leased car / taxi	Taxi Public transport	Car company car
Emotions												
Pain Points	Client might not find the category / might feel overwhelmed	Client might feel long process or unnecessary step	Client can't find service center near its work/house.	Client can't find a suitable timeslot		Client find excessive cost. client wants more details	Client takes too long to arrive. Feeling: there's nothing to see around here.	Client doesn't know where to go.	Client doesn't knows how much needs to wait, or feels uncomfortable.	Client doesn't like its loan car	client needs to spent money or time for long journey to service center.	
Opportunities		Explain importance of this step: this is the single point of contact with technician. Improve UI: progress bar?	Increase the service locations.	Increase the service locations. Increase the timeslots (24X7 possible?)		Send by email details of the estimate. Explore the need of this step in this stage (experiment?)	Service Center closer to the city. Car company could inform what other activities there's around (malls, museum)	Get guidelines in the car (touchscreen) where to go.	Client access a 'Car company Service VIP card': allows him/her to go to the nearby restaurants, meanwhile waits for its car.	Client could choose other means of transport: NS Card / Bike	A service center closer to the client would be optimal solution. Meanwhile a transportation subsidy by Car company.	Message in car's screen: thank you for using our service.
Critical Process	No Critical	Medium Critical	Critical	Critical	No Critical	No Critical	Critical	No Critical	Critical	Medium critical	No Critical	No Critical

From the CJM the critical painpoints are related to:

- Importance to let the details of the repair clearly in the APP
- There's not enough service centers available

3. Problem definition and Strategy

Previous research has helped to understand and define the problem to tackle:

How might Car company

1. Enhance the customers experience in the service centers,
2. Keep its employees motivated, and
3. Be more costly efficient at the same time?

Solution - Car company 'Tech only Service Center'

'Tech Only Service Center' Strategy Pillars

1. Inexpensive implementation

- Tech only Service center will not have customer representatives in store, but they will work remotely
- Tech only service center will be smaller than the big regular centers, its capacity will be around 50% of the large ones, with no 'client's waiting room'
- For the same reason, the space rental will be considerably lower

2. Near to the customer

- Tech only service center should be located in the city. Amsterdam example: Oud-zuid, Park de meer, oud-west
- Tech only service center should be located not far from attractions such as malls, restaurants, etc.
- Tech only service center in city generates a virtuous circle

3. Great Customer Experience

- Tech service appointments should be through the APP
- Details where to park, pickup car, return loan car should be in the APP / screen
- Car company Advisors will be phone available during whole process
- Status of the service in the mobile APP should be frequent and accurate

4. Maintain employees' satisfaction

- "In house" advisors will be supporting clients from a remote location (or home)
- Advisors will have the opportunity to develop in the company:
  - Collaborate with the "Car company mobile rangers" team
  - Collaborate with the CX team as "voice of the customer".

4. Detailed process for ‘touchless’ experience

Based in previous pillars, the ‘touchless’ process should be the following:

Mobile APP Appointment	Before Arrival	In Service Center	Technical review	Pickup car

• Client selects: schedule service, select type of service, and type notes & photos
• Client place its address and the option of ‘Tech only service appears’
• Client selects ‘Tech only service’ and timeslots are shown
• After timeslot is chosen, client is asked to confirm the notes and photos: ‘Client needs to be specific in this part since there’s no advisor in this service’
• Client receives message: exact parking space will be share one day (hour) before your appointment
• Client confirms appointment.
	• Before its scheduled service (day before or hours before), client receive call from Car company advisor (email or message if client don’t answer call), to emphasize that the client just need to leave its car in the parking garage
	• Advisor will inform client that if any doubt in the service center, client can call the advisor back, but advisor wont be in center
	• Before its scheduled service, Client will receive a message in the app where exactly should park and leave its car in the center. (including guides, photos and detailed instructions)
	• Same message should be displayed in the car touchscreen
		• Client enter service center and parks in specific space
		• After parking, client checks-in through the app
		• Validation occurs between car and parking space. If correct client will receive a ‘Car company Free-pass virtual card’ with free tickets for shops nearby the service center. This free tickets will have a specific timeframe (hours only). This card will replace the ‘waiting room’ that big service centers provide
		• Client receives message that technician will take 30 minutes to asses the repairing time, and will inform immediately
		• Client leave service center, meanwhile the technician inspect the car
			• Technician will have 30 minutes to assess if repair can be done ‘in the air’, or car needs to stay
			• Technician will update on its system status of repair:
			  ▪ Can be done in x hours
			  ▪ Car needs to stay overnight
			• If car needs to stay, and there’s loan car available, client receives instruction from which parking space pickup loan car
			• If there’s no loan car, or client refuse loan car, a transportation ticket will be sent to its email
			• Client will receive a estimated time to pickup car
			• If client needs any support, can call the Car company advisor
				• Client will track status of its service trough the APP
				• Once car is ready to pickup, client will receive the specific parking space where to pick its car, and where to leave the loan car (if applicable)
				• Client should pay the cost of its service through the app.
				• Client will leave the loan car in parking space, and pickup his/her car
				• In case anything is missed, client can call its service advisor

Key Factors	✓ **Client details about the problem**	✓ **Client understand the difference with its previous visits.**	✓ **Client values the virtual card same as waiting room**	✓ **Technician can assess in 30 mins the repairing time** ✓ **repair time is no longer than average**	✓ **Process should run smoothly.**

5. Potential problems - Risks

Previous ‘key factors’ for success are also risks in the implementation. This action plan could be considered in case the problems persist.

Problem	Action plan
Client don’t leave details of the service in the mobile APP (no photos, no comments)	One more step should be added in the service appointment process: after selecting ‘tech only service’ client should confirm its comments, or for some specific services a photo is compulsory. otherwise wont be possible to continue.
Client leaves its car in different parking space that the one specified	Parking spaces should have a sensor/mechanism to identify the car is correctly positioned. If is not correct a message will be sent to the client to move the car. If after some time client don’t move the car a call from the advisor will be required.
Client is annoyed that there’s no waiting room in tech only service center	After service survey will include a specific question about the replacement of the waiting room with the ‘Car company free-pass Card’. In case negative feedback client will be remember to choose other service in next appointment (message in the app).
Technician takes more than 30 minutes to assess repairing time	In case there’s no update from technician after 40 minutes, an automatic message will be sent to client informing that repair wont be ‘in the air’ and might take more than 4 hours, and client can pickup loan car (if applicable). If happens frequently: adjust SLA
Repair time takes longer than average	In order to don’t create a ‘bad reputation’ to the Tech only Service Centers, some services/repairs that usually are ‘complicated’ and uncertain in the repairing time shouldn’t be considered for this channel. This will require an extensive analysis to don’t give the perception of ‘limited services’ to the Tech only Service centers.

6. Financial Analysis

- From the financial point of view, we need to consider that the tech service center is a side project to the main Car company business: Cars Sales
- Therefore, the ROI on this project will not be as large as another Car company Business

Revenues for 1 Service Center

= (Average ticket for a car visiting the service) X (Amount of cars visiting the tech service center)

Average ticket = € 334.6/year
Number of Services = 2,304/year (10% increase every year)

Revenue in 10 years = € 13,316,384

Costs for 1 Service Center

- Rental expense for tech service center = € 450,000/year
- Leased equipment = € 24,000/year
- Payroll = € 3,480,000/10 years
- Reparation cost = € 50/car

Costs in 10 years = € 8,917,458

=

€ 4,4m in 10 years

ROI = 49%

Please forward to 'Appendix' for details on this calculation

7. Requirement's prioritization

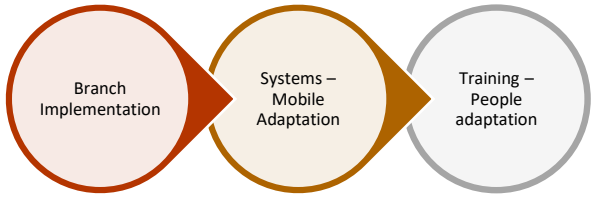
How to prioritize all the requirements?

There are several teams involved in this project:

- Real state team: To find a proper space.
- Branch implementation team: To lease equipment and make the service center up and running.
- CX Mobile Team: to make adjustments in the APP
- Car company Advisors team: To train in its new function for remote service.
- Technicians team: To train them in the updates in the app for the new Journey

… and probably others that I'm missing.

In a high level overview, the process should follow:



Enter into more details and assumptions would take much more time to develop. To come with a proper prioritization, I'd use scrum-agile (for example to have an MVP in the Mobile app changes).

8. Conclusions

- Due to the exponential sales in Car company Cars, the number of service centers need to increase quickly.
- **My case has focused in opening new service centers, more than replacing the current ones.**
- Car company shouldn’t focus in big service centers, but in many small ones inside the city, this will also generate branding and create a virtuous circle increasing more sales.
- Car company client is already experiencing ‘Touchless’ service experiences with the ‘Car company rangers’, so the transition shouldn’t be a problem.
- Competition is fierce in the EV sector in Europe, and Car company can’t expose to bad advertising. Employees in the service centers should evolve and Car company should use its expertise in many other departments.

9. Recommendations

- Open new ‘tech only’ service centers, clients will have a smooth transition.
- The main point of contact for scheduling appointments is the mobile app, Car company should enhance the capabilities in the software development team to have the app always up and running.
- Marketing team should increase communication about the importance of being specific in the appointments (take photos, comments, etc), this will help the technicians and the client to repair faster.
- Car company should use the service advisors as part of their CX team, to understand better their customers.

Appendix

Revenues

Repair Service	Cost	Average	Prob event	Cost
Brake caliper replacement	$357 - $593	475	0.1	47.5
Oxygen sensor replacement	$271 - $444	357.5	0.1	35.75
Window motor regulator replacement	$592 - $851	721.5	0.15	108.225
Wheel bearings replacement	$325 - $394	359.5	0.2	71.9
Repair cost in 5 years				263.375
Repair cost per year				**52.675**

Year	Maintenance Service	Cost
1	Tire rotation	100
2	Full service with A/C	525
3	Tire rotation	100
4	Full service with brake flush	585
5	Tire rotation	100
	Total maintenance 5 years	1,410
	Maintenance cost per year	**282**
	Total (Maintenance + Repair)	**334.675**

This calculation just for the Average Ticket

Source for maintenance costs: https://www.motor1.com/reviews/406938/Car company-maintenance-cost/

Year	Amount of Services	Revenue
1	2,496	835,349
2	2,746	919,018
3	3,021	1,011,053
4	3,323	1,112,125
5	3,655	1,223,237
6	4,021	1,345,728
7	4,423	1,480,268
8	4,865	1,628,194
9	5,352	1,791,181
10	5,887	1,970,232
Total Revenues 10 years		**13,316,384**

Amount of services =
8 services per day x 25 days per month x 12 months.

Amount of services increase in 10%.every year.
Revenues = Amount of services x 334.6 EUR (average Ticket).

Costs

Payrolls

- Manager: 1 for 72K per year
- Admin: 1 per 36K per year
- Technicians: 3 in first 3 years. 4 in 4 next years, 5 in last 3 years. Each of them with 60k per year

Year	Technicians	Admins	Manager
1	180,000	36,000	72,000
2	180,000	36,000	72,000
3	180,000	36,000	72,000
4	240,000	36,000	72,000
5	240,000	36,000	72,000
6	240,000	36,000	72,000
7	240,000	36,000	72,000
8	300,000	36,000	72,000
9	300,000	36,000	72,000
10	300,000	36,000	72,000
Total	**3,480,000**		

Reparation
Reparation cost is a % of the average maintenance ticket: 15%
0.15 x 334 = 50

Rental
Rented Space is 80 x 80 m2
Cost per m2 per year is 50 EUR
Total rental cost per year = 80 x 80 x 50 = 320,000

Total Cost 10 years:

Rental: 320,000 x 10
Leased Equipment = 24,000 X 10
Reparation Cost = 0.15x 334.575 x 39,789
Payroll = 3,480,000

Total costs 10 years = 8,917,458