London cab 2.0

classic black and white image of a line of parked taxis in London.

openSAP.com 2017 | Touch IoT with SAP Leonardo
The Fiori application “London cab 2.0” has been designed to simplify the work of dispatchers, as well as to improve their UX hugely. It has been the outcome of the design thinking strategy, where feedback of low resolution prototypes pointed out the real issues.

The original idea to monitor the technical state and to analyse the usage of the fleet has been kept in the format of analytical diagrams. Build up lots of statistics to eventually discover a pattern that can be taken in consideration when calculating new schedules or routes. For example standstills: is there a pattern to discover between time and place? Is this pattern the same for different durations of standstills?

Most importantly, a dispatcher must be able to track down the fleet of the company, as well as a specific cab in detail, at all time. London cab 2.0 was designed around a big ‘tracking’-container, where all GPS coordinates are updated in real-time. This live-view doesn’t only display the current position of a cab, it also has all his past routes in memory to be displayed, compared or analysed in a second. But the real strength of this application must be the predictive possibilities, which are the biggest help to dispatchers by fixing assignment matches and planning schedules.

Seamlessly integrated and real-time traffic feed triggers an alert on the monitor when a traffic jam was predicted on the driver’s route. Immediately, the dispatcher gets several options with new route and the impact on time keeping, next bookings and driver’s schedule. Once the decision has been made, all follow-up actions are performed automatically. The driver gets an update on his board GPS-system, while a message has been sent to the customer in case the delay is over 2 minutes.
PERSONA

ABOUT
• 34 years old, married, 2 little children
• born, raised en now living in London
• very active on social media (Facebook, Twitter, Pinterest)
• likes art, electronical music and skiing

RESPONSIBILITIES
• I am responsible for an optimized occupation of 30 taxi's belonging to our fleet.
• I decrease waiting times for our customers, as well as for our drivers
• I help our taxi drivers and advise them in case of traffic jams.
• I follow up the safety of our customers and drivers and in case of accidents, I call for assistance and arrange another cab for the customer

NEEDS
• at all time, I need to have a real-time overview of our fleet
• in an instance, I need to get in contact with the driver, customer or assistance
• I need predictive analysis tools to help me making the right decisions
• I need to have alerts for emergencies, traffic jams, ..

PAIN POINTS
• I have to work with multiple applications with delayed interfaces
• I don't have the time to enter all data manually
• I don't have analytical assistance

MAIN GOALS
• manage chaos
• optimize the occupation of our fleet
• ensure success
• land a promotion
## UX Journey

<table>
<thead>
<tr>
<th>Actions</th>
<th>Touchpoints</th>
<th>Feelings</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>→ incoming call/booking → search for possible matches → find a free cab and driver → assign the customer request with a matching cab → pick up customer → report of traffic jam on predicted route → search possible changed routes → predict impact on driver schedule and possible delays → determine a new route → send trajectory-change to GPS driver → customer reached his destination</td>
<td>→ telephone headset → dashboard access → list of free cabs → schedule drivers → intranet → dashboard access → GPS tracker fleet → live feed traffic control → list of free cabs → schedule drivers → dashboard access → GPS tracker fleet</td>
<td>→ A new booking? → I still need to find a solution for the previous booking! → I don't find a free cab in a radius of 2 km... Aaaargh!! → Ok, customer request finally got matched with a cab... → Yes, customer just entered the taxi... → This customer got off perfect! → Oh no! This traffic jam will destroy my planning!! → Is the interface delayed again? How can I do my work?? → Search again for a new solution. → Yes, this must be the best resolution!!</td>
<td>→ Success without delay!!</td>
</tr>
</tbody>
</table>
POV

As a senior dispatcher of cabs, I need a way to help me with taking urgent and ad rem decisions, so that I can spend more time matching the customer requests with our available taxis.
### London Cab 2.0 Prototype

**Driver:** John Doe  
**License Plate:** 1-CAB-012  
**Next Maint.:** 11/2018

<table>
<thead>
<tr>
<th>Customer</th>
<th>Address</th>
<th>Destination</th>
<th>Price (BP)</th>
<th>CAB</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lisa Kembell</td>
<td>Kingsland 7, London</td>
<td>Parklane 2, London</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thomas Doe</td>
<td>Small Street 124B, London</td>
<td>Wide Street 124, London</td>
<td>16.00</td>
<td>TX4 - 0049</td>
<td></td>
</tr>
<tr>
<td>Mark Summing</td>
<td>Top Street 1112, Birmingham</td>
<td>Down Street 74, London</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**5-doors back:**  
- **59%** satisfaction  
- **87%** accuracy  
- **41%** standstill

**Occupation**

![Occupation Graph](link BUILD prototype: https://standard.build.me/prototype-editors/api/public/v1/snapshots/6f0d395f0ad63cd30e1ee957/artifacts/latest/index.html#/london_cab_2_0)
BUILD

link BUILD prototype: https://standard.build.me/prototype-editors/api/public/v1/snapshots/6f0d395f0ad63cd30e1ee957/artifacts/latest/index.html#/london_cab_2_0