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Ruter Dialogue Conference Passenger Counting

January 14, 2016

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Questions posed by Ruter



Question 1

How should Ruter move forward in order to achieve a future model where potential on board systems and equipment (passenger counting included) are based on an open, service oriented architecture, open interfaces and shared functionality, in accordance with common European standards?

- a) What considerations are important to make regarding the acquisition of a future-oriented solution for passenger counting?
- b) What different solutions and delivery models for passenger counting should be considered, and which are preferred?



Question 2

How can Ruter utilize counting data as a customer information element?

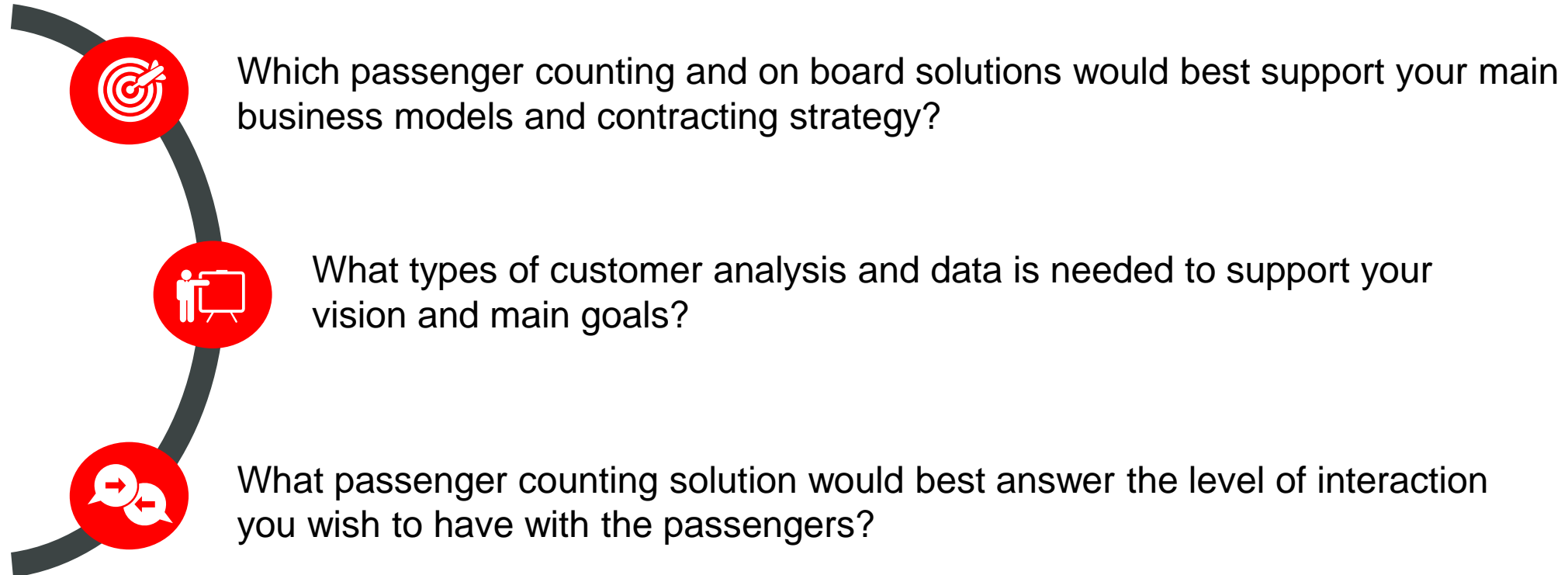


Question 3

What do you consider important that Ruter do, and how, in order to make it possible/interesting for you to participate in a tender?

To understand which model to choose for on board systems and passenger counting, Ruter should consider which goals they wish to realize

Answer to Question 1



Based on Ruter's situation, we believe there are two main solutions for passenger counting with some important trade-offs

Answer to Question 1 b)



Sensor-based solution

The best choice for a simple passenger counting solution

- + Can typically reuse existing sensors
- + Typically high accuracy (>95 %)
- + Unnoticeable
- Limited to entrances/exits
- Can only offer basic counting of people



Video-based solution

The best choice if you want more extensive analytics

- + Can reuse existing surveillance cameras
- + Typically high accuracy (~95%)
- + Can identify e.g. passenger flows, crowding, demographics, unattended baggage, suspicious people etc.
- + Can be integrated with other on-board systems for live updates
- Often more expensive than sensor-based solutions

The best solution may be a combination of both

Ruter could choose between various delivery models...

- It could be delivered **on-premise**, as a **managed service**, or as a **combination** of both
- It could be set up as a **value/ outcome** based service

Adding analytics to counting data can improve current services, and possibly support a transformation of your services

Answer to Question 2



Improving simple counting data may advance...

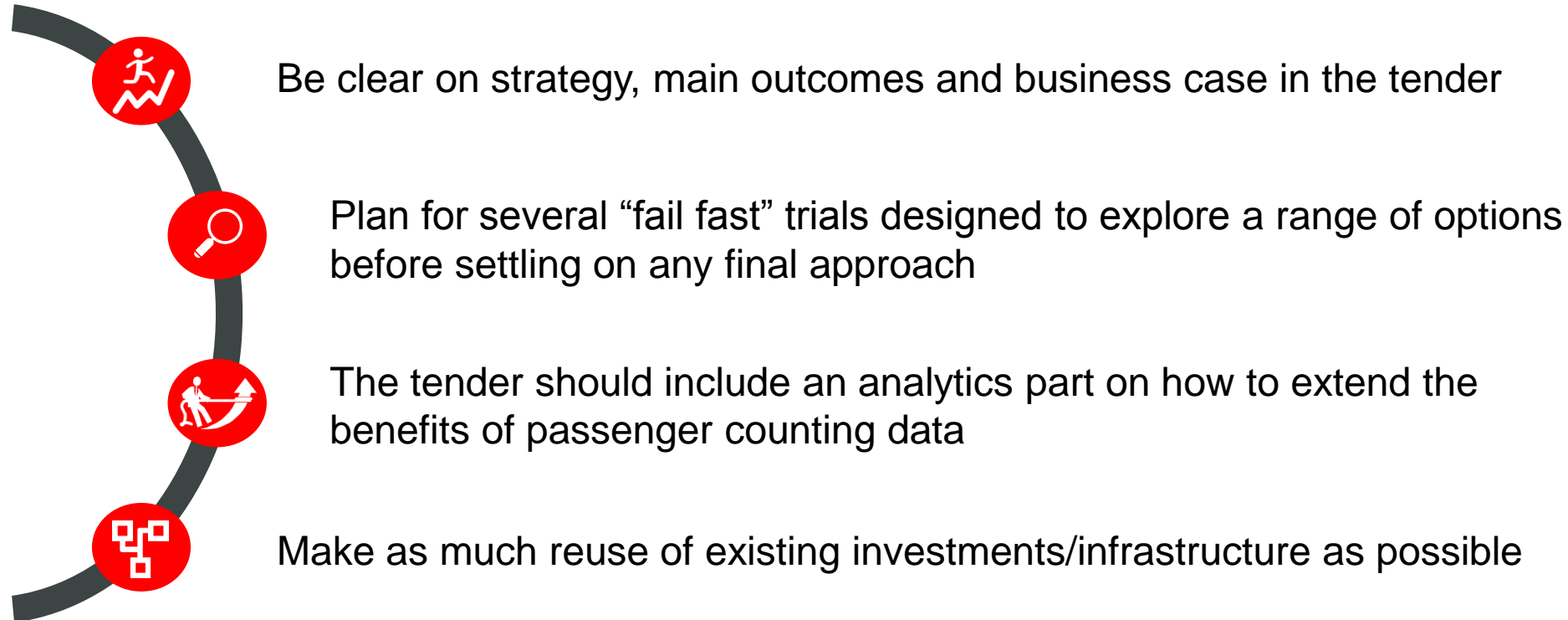
- **Route planning**
- **Capacity planning**
- **Basis for material investments**

Adding analytics to counting data may enable...

- Passengers to see what bus/train carriage is full and thus **improve boarding and exit**
- Advance notice of where to stand on platforms to **board the least loaded train or bus entrance**
- **Improved journey planning** linked to loading trends
- Adjusting to **passenger expectations** and improving quality of the service

Accenture believes it's critical that a tender should be seen in parallel with a wider effort to improve Ruter's analytics capability

Answer to Question 3





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Thank you for your attention!