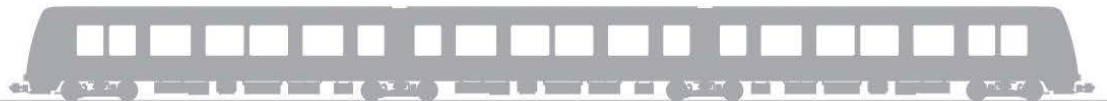


Handling Passenger Information

by Claudio Cassarino, Managing Director



Agenda

About us

Status

Challenges

Initiatives

The Copenhagen Metro - Facts

Driver
less

Open
24/7

21

km lines

22

stations

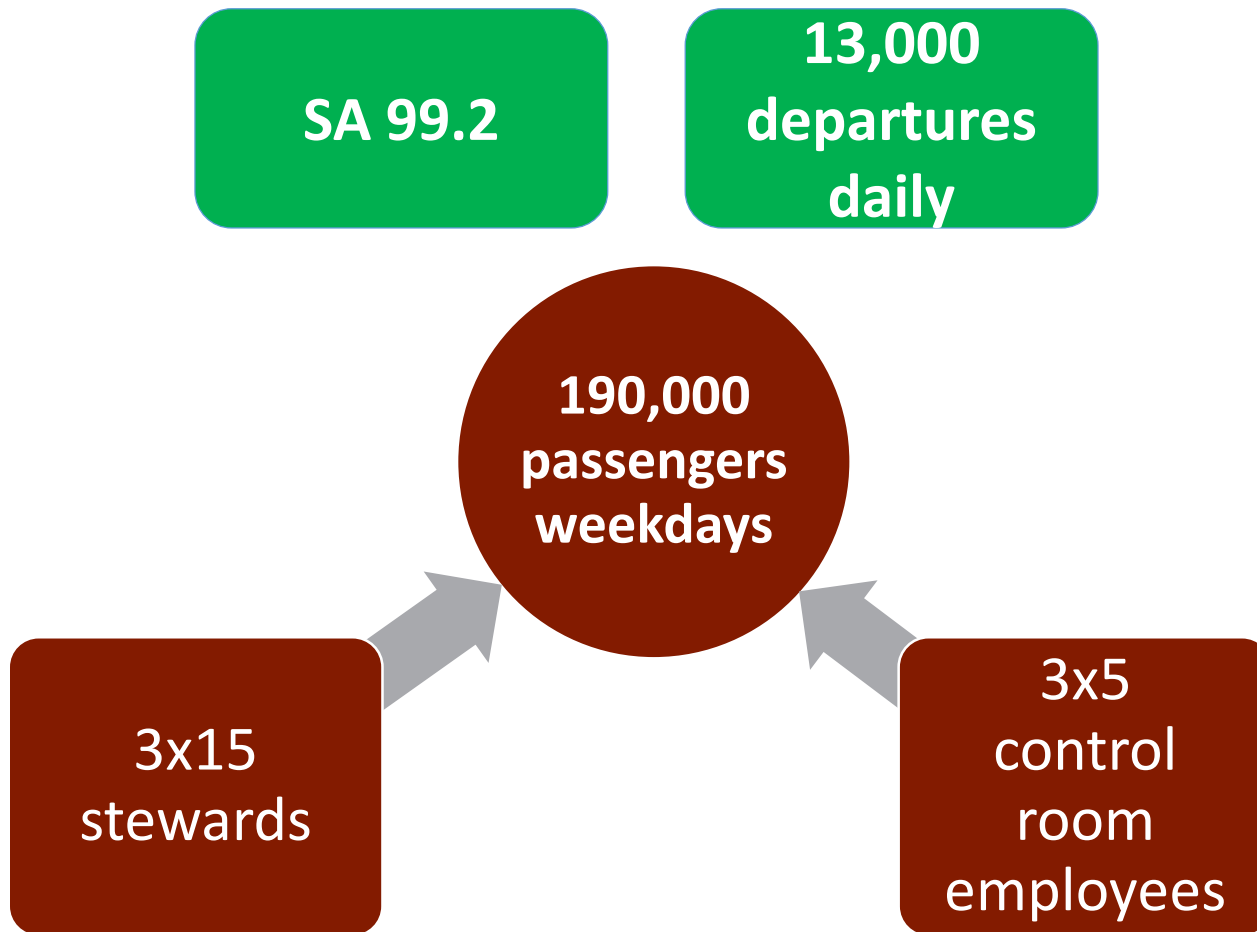
34

trains

60.1

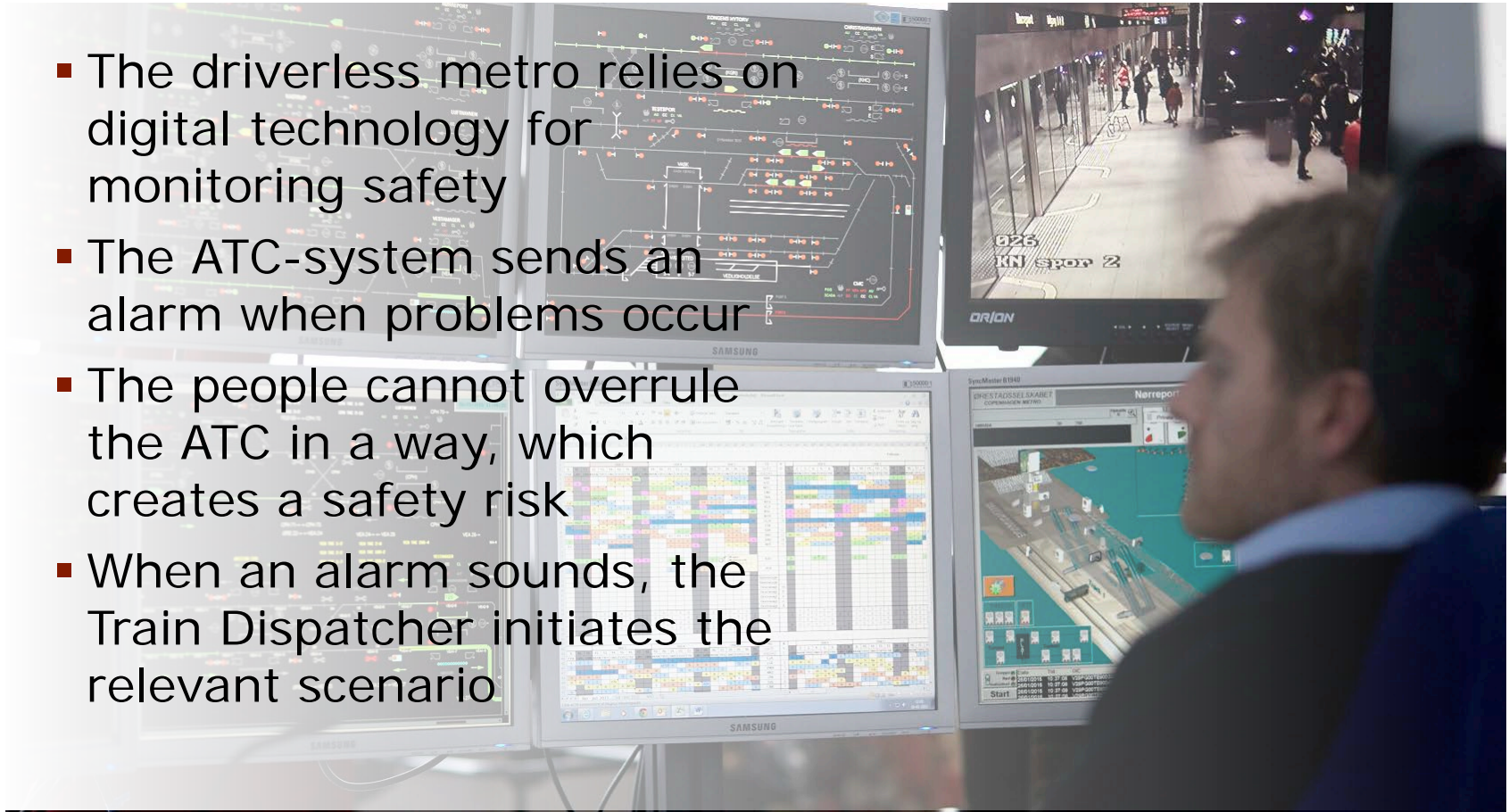
million
passengers

We strive to meet high expectations



The ATC-system & safety

- The driverless metro relies on digital technology for monitoring safety
- The ATC-system sends an alarm when problems occur
- The people cannot overrule the ATC in a way, which creates a safety risk
- When an alarm sounds, the Train Dispatcher initiates the relevant scenario



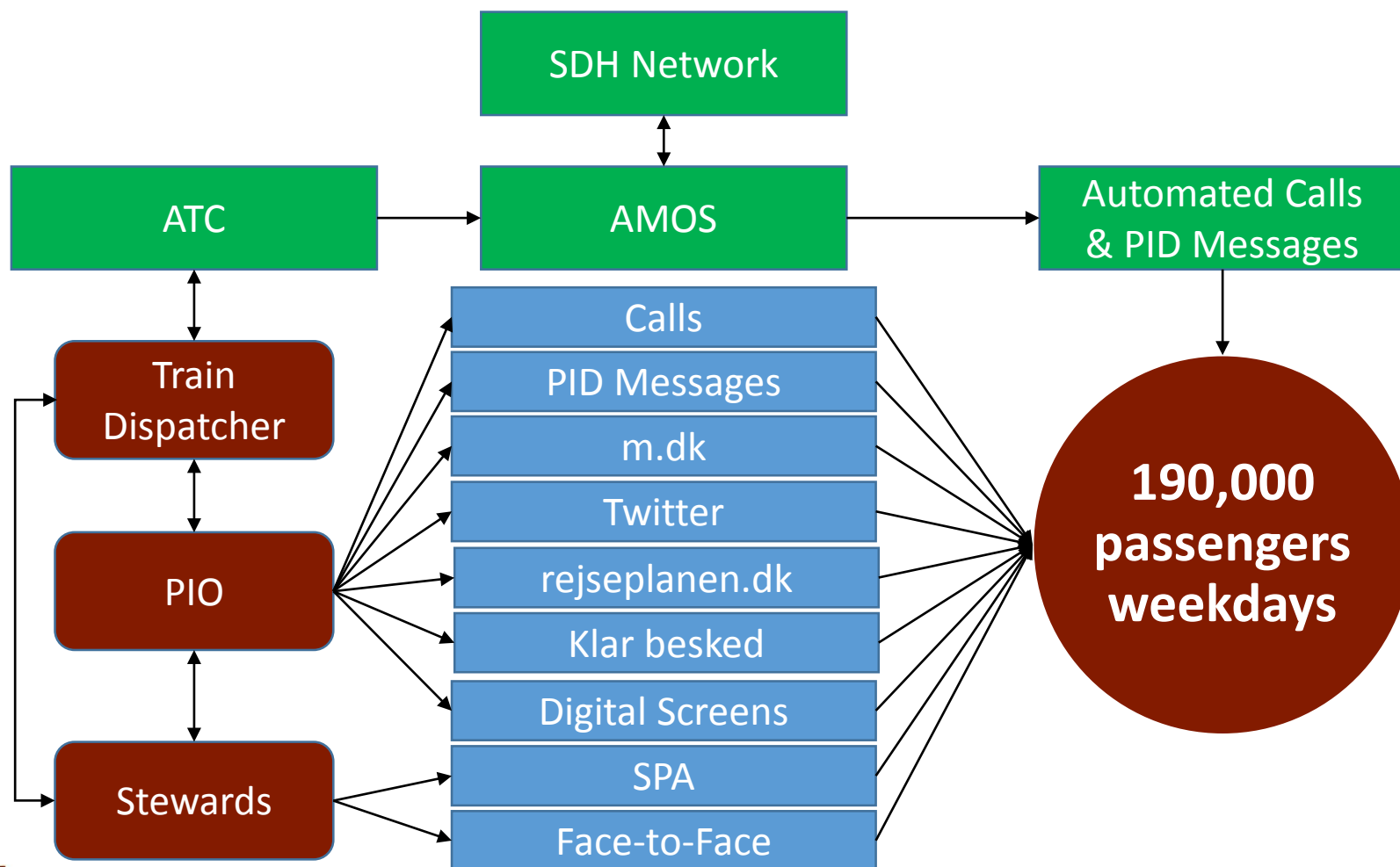
PIO responsibilities for passenger information

- Live information calls to trains and stations
- Alarm and info calls from passengers
- Messages for
 - Platform displays
 - Twitter and m.dk
 - Digital displays
 - Information to other PTO's
- Log what is said and done
- Service for malfunctioning ticket vending machines

Steward responsibilities for passenger information

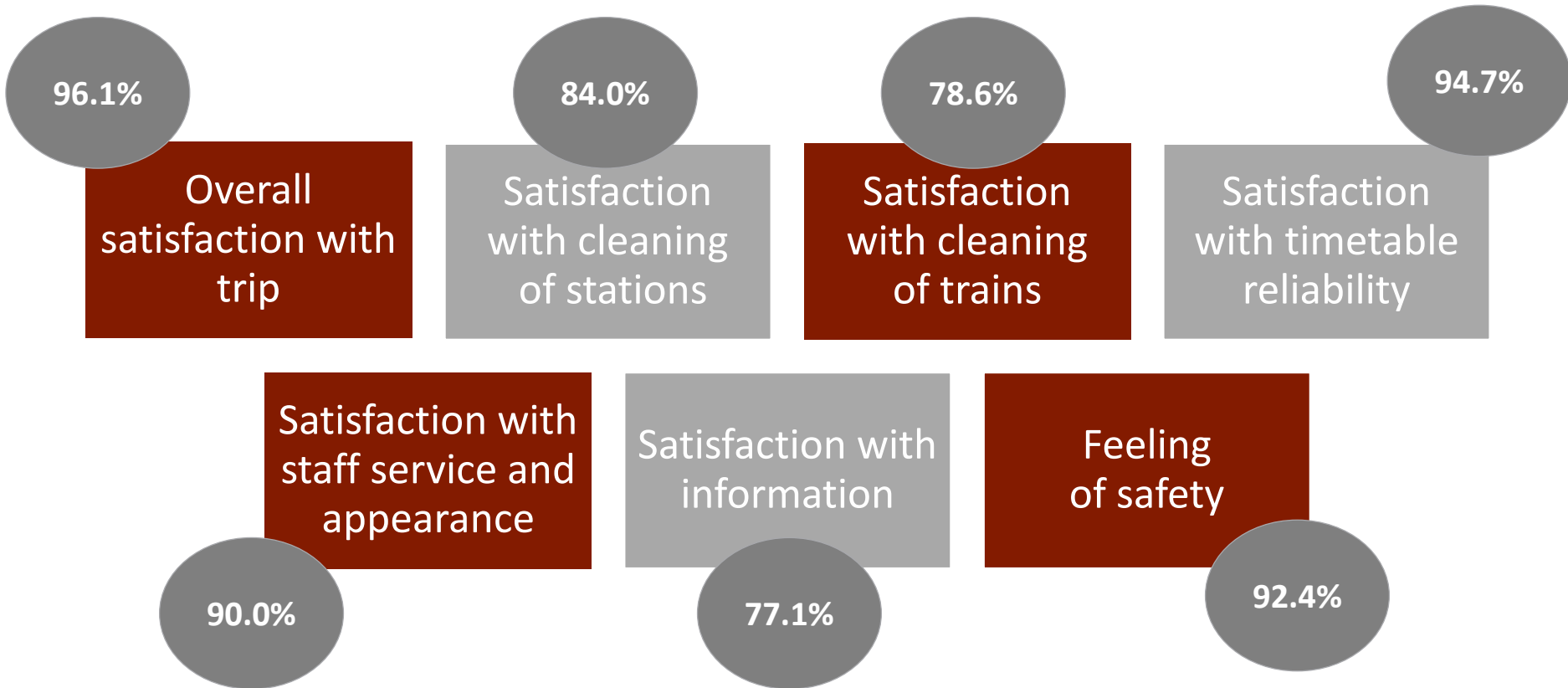
- Passenger information
- Crowd control
- Passenger questions
- Ticketing
- First aid and light firefighting
- Manually operating malfunctioning trains
- Checking station and train equipment
- Reporting all errors, graffiti, etc. to the control room

The Passenger Information Flow

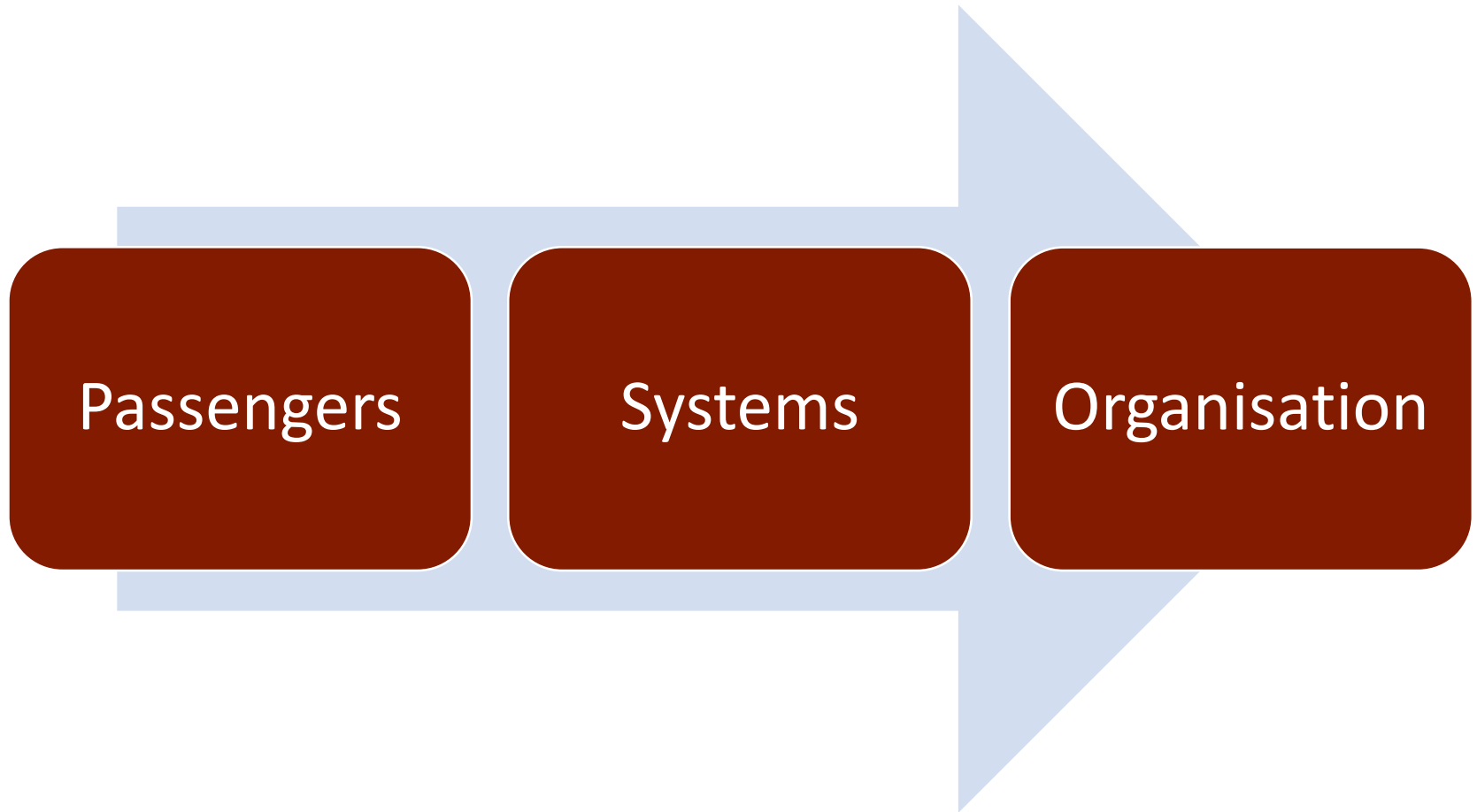


Measuring customer satisfaction

Total 2016, in percent



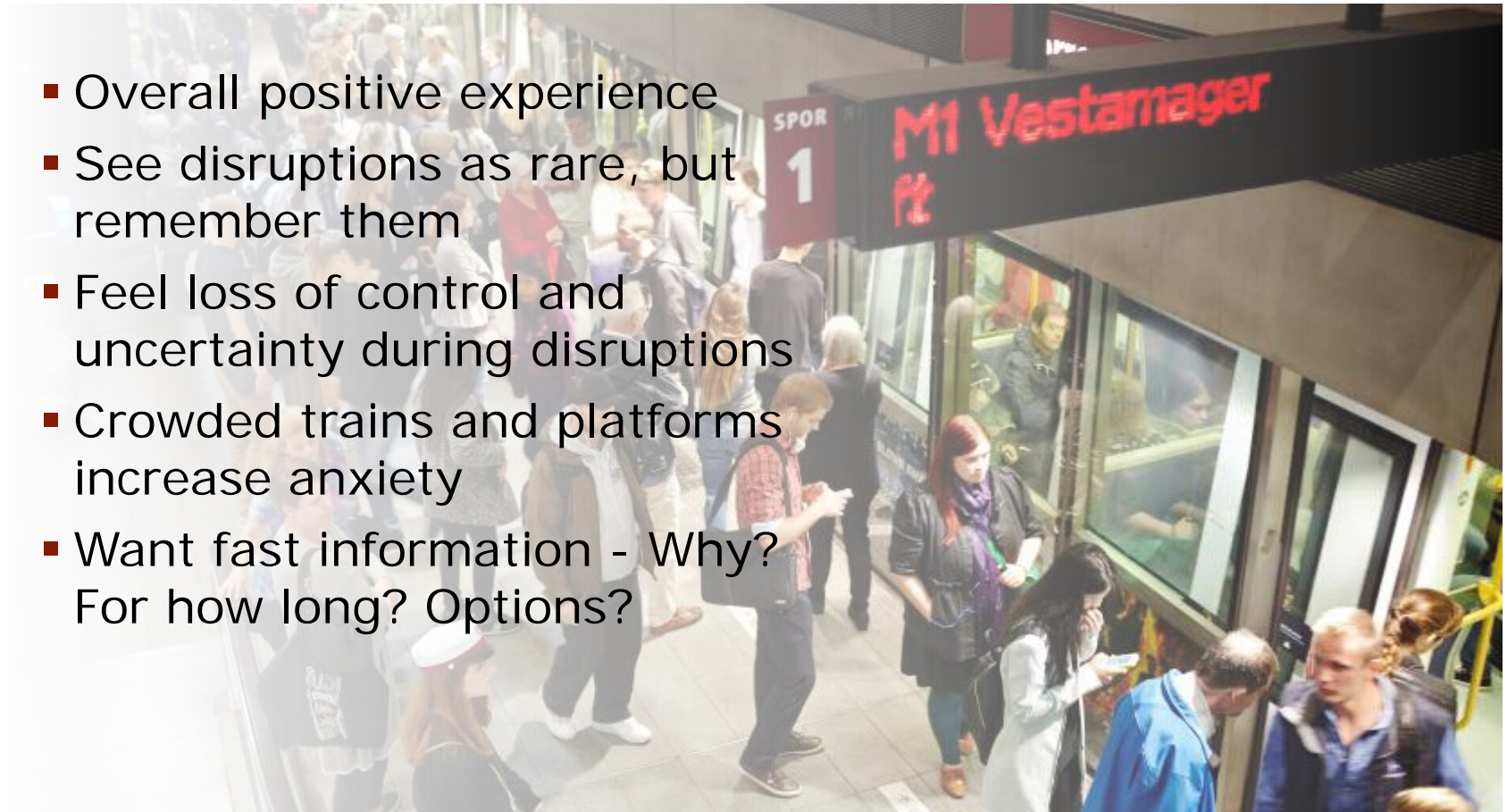
Moving forward



The passengers' perspective

- Analysis August 2016

- Overall positive experience
- See disruptions as rare, but remember them
- Feel loss of control and uncertainty during disruptions
- Crowded trains and platforms increase anxiety
- Want fast information - Why? For how long? Options?



Challenges in the current system during disruptions

- Not all messages are received
 - Queues overlap
 - Messages are lost
- The system is not scalable
 - Second PIO means less reliability
- The system set-up is limiting
 - Several different media
 - Answer passenger calls

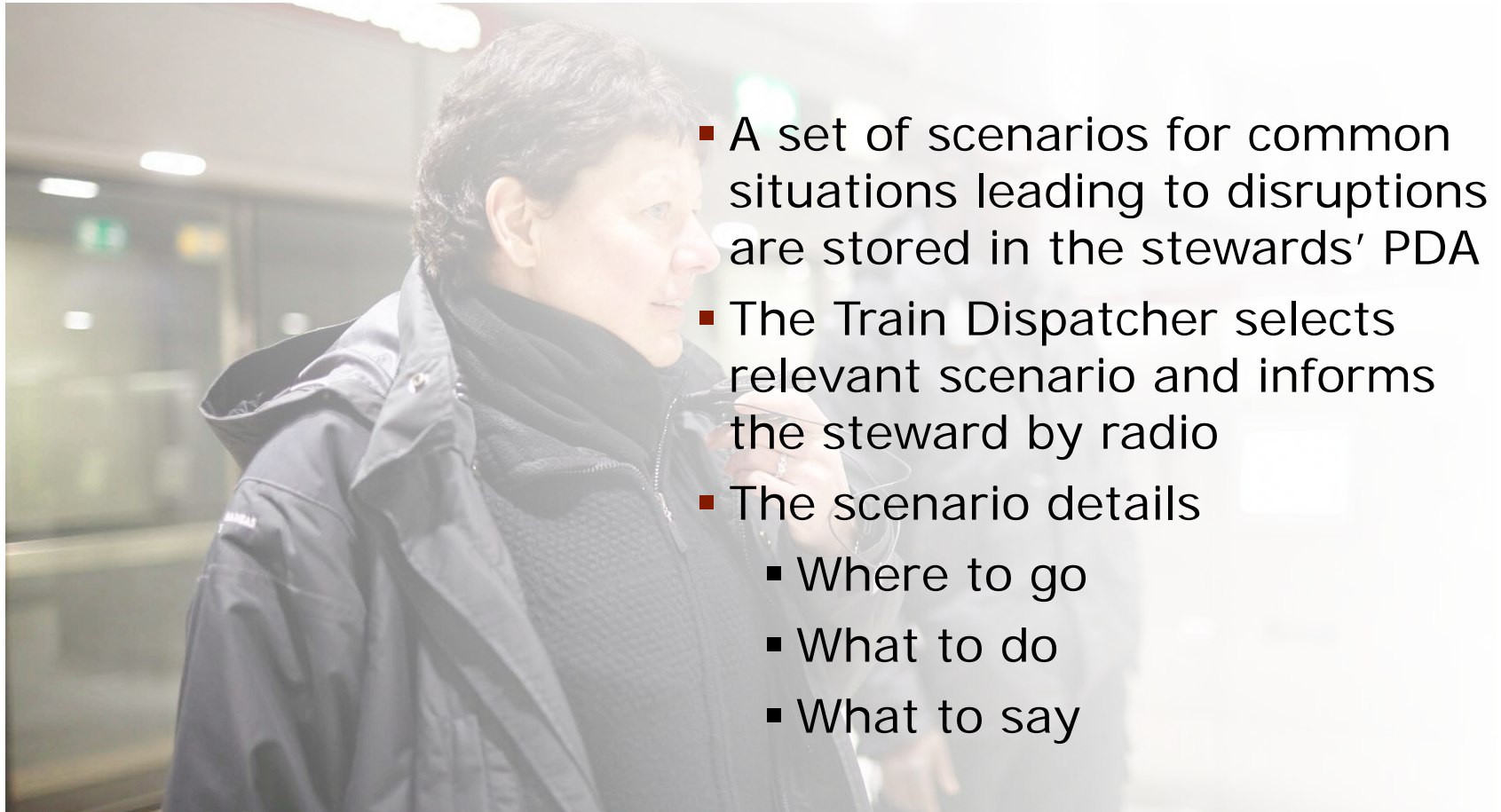
Strategic focus areas to improve passenger information

1. Securing a system with excellent sound
2. Securing a system where all service calls get through
3. Strengthen relations between CCR and stewards
4. Addressing the barriers for making live SPAs
5. Rethinking the priorities of the PIO

Improving the passenger information system

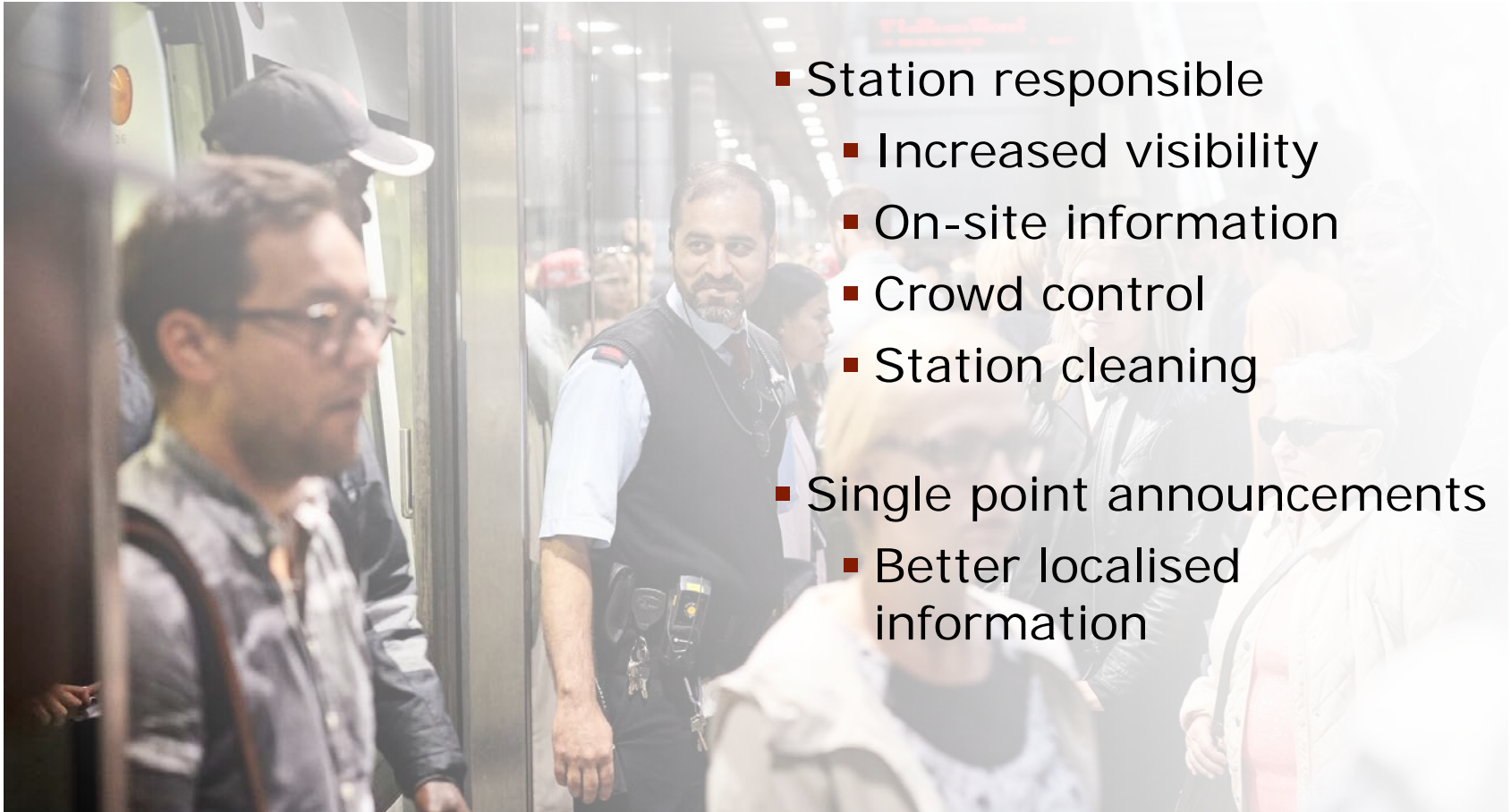
- Continuous improvement of sound
 - Volume adjustments
 - New microphones
- New SDH network and AMOS system 2017-2018
 - Better sound
 - Higher reliability
- Continued development:
 - One single interface for PID, social media, digital displays, etc.
 - PIDs with three lines of text

Scenario planning gives better and faster information



- A set of scenarios for common situations leading to disruptions are stored in the stewards' PDA
- The Train Dispatcher selects relevant scenario and informs the steward by radio
- The scenario details
 - Where to go
 - What to do
 - What to say

New responsibilities for stewards improves passenger service



- Station responsible
 - Increased visibility
 - On-site information
 - Crowd control
 - Station cleaning
- Single point announcements
 - Better localised information

Commercial digital displays can be used during disruptions

- Can be taken over by Control Room during a disruption
- Ongoing implementation
- Large potential



Any Questions?



Thank you