



Terminals of the Future

Effects of Actual and Future Trends on the Passenger Infrastructure

Results of the Questionnaire

Presentation at the 30th ACI-Europe Facilitation and Customer Services Committee Meeting in Amsterdam

1st October 2013, Torsten Hentschel

1. Introduction
2. Check-In/ Bag-Drop
3. Boarding-Pass
4. Checkpoints
5. Gates and Boarding
6. Information
7. Low Cost
8. Other Trends
9. Further Studies

The Study

Bachelor Thesis by Sarah Born:

- Conducted at Hamburg Airport for the Terminal Management Department
- Co-Supervised by TH Airport Consulting

Goals:

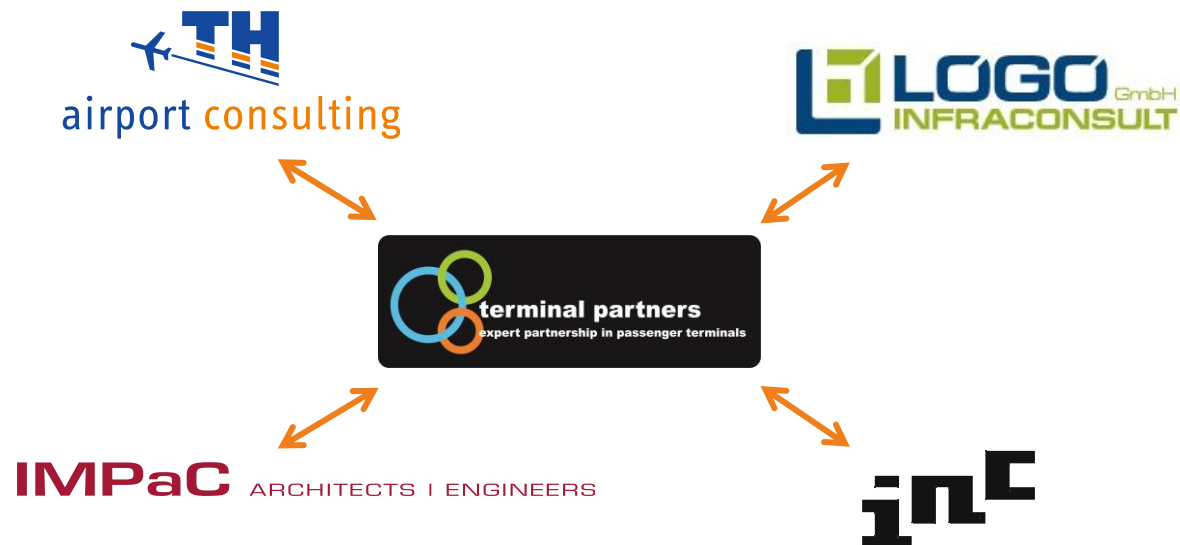
- Complete overview of trends for Airport Terminals
- Rough evaluation of the effects of these trends
- Visions for the Check-In Hall of the future

TH Airport Consulting

TH Airport Consulting , a totally independent consultancy, offers services for planning and optimization of airports with a focus on

- Terminal Planning
- Airport Processes
- Project Coordination

Our Network:



Content of the Study

Literature research on actual and future trends



Evaluation of effects on the terminal infrastructure



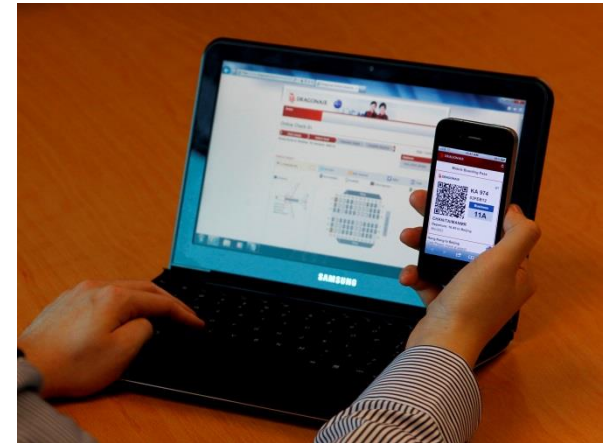
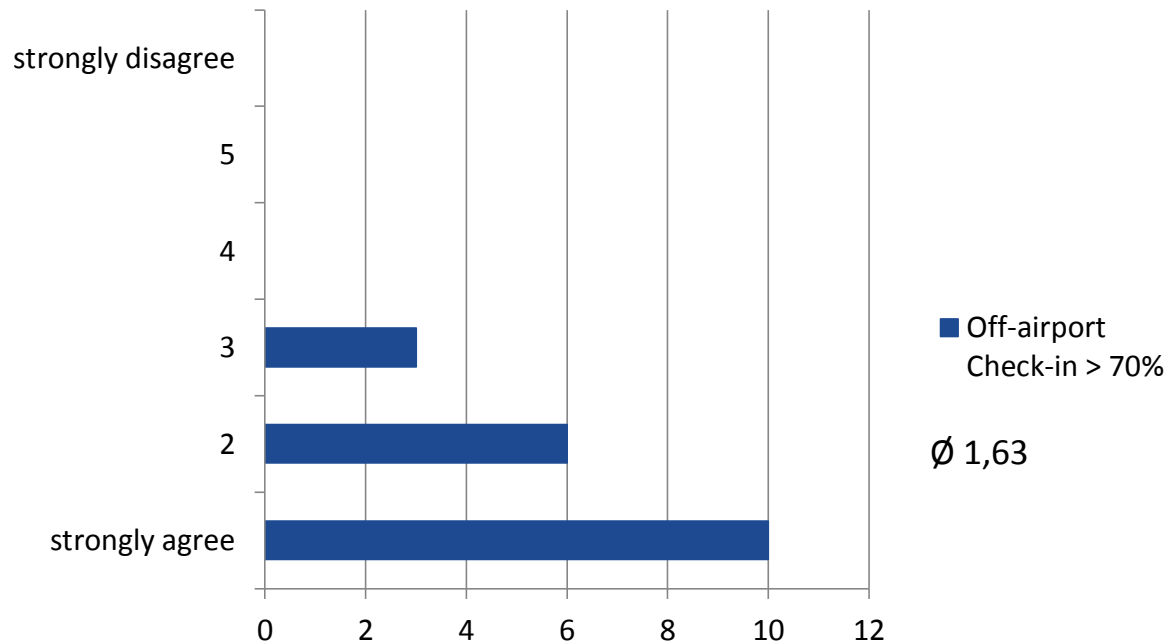
Questionnaire

20 Questions on possible trends -> 19 participants



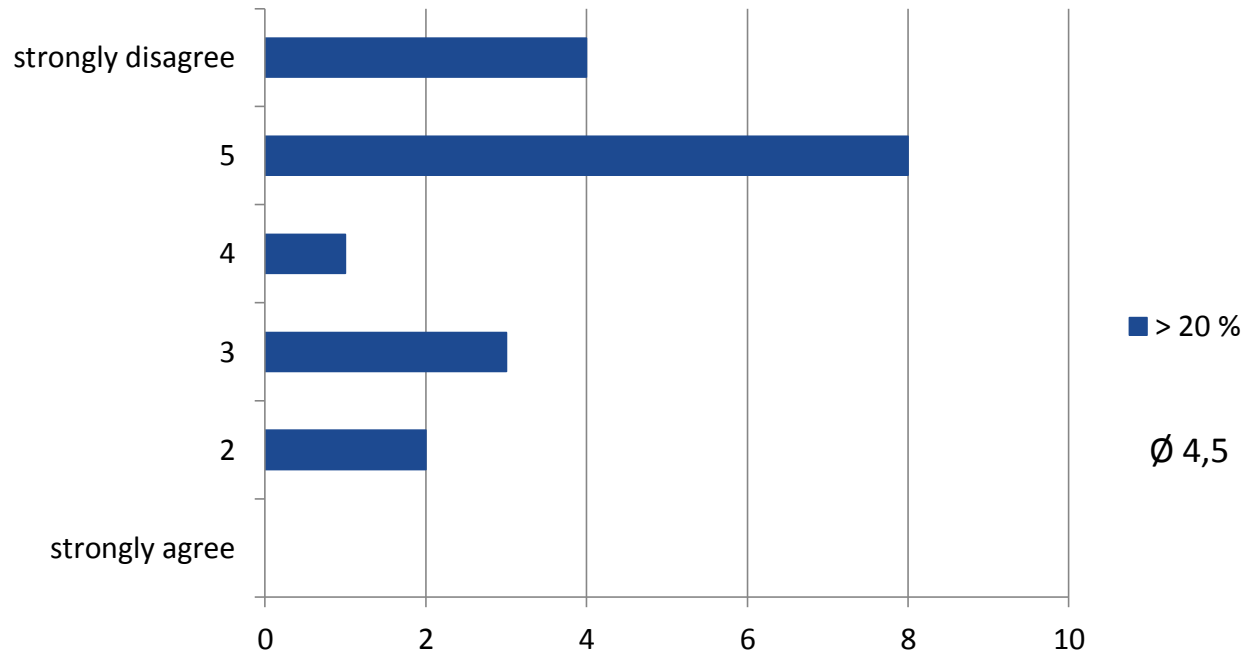
Special focus on Check-In/Bag-Drop
Visions for the Check-In Hall of the Future

In 2025/30 more than 70 % of all passengers will check-in off-airport.



- Most conventional Check-In counters and kiosks will disappear
- Check-In hall will mainly be used for baggage drop-off

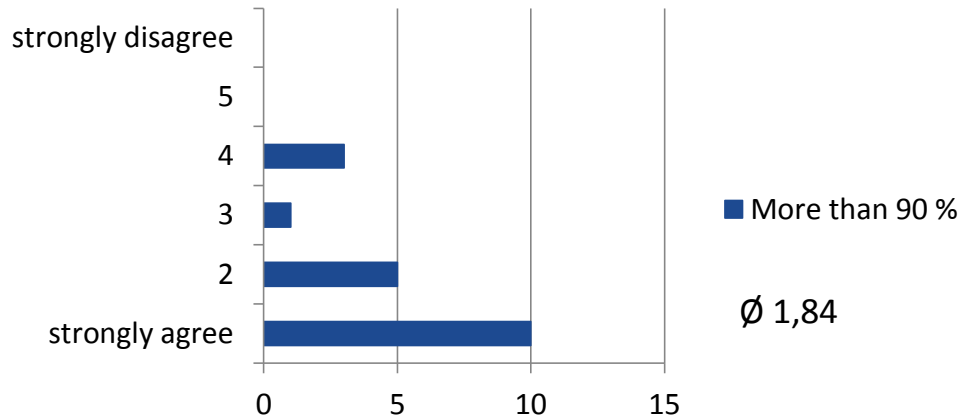
Under the assumption that Economy passengers will have to pay for their luggage in 2025/30, more than 20 % of passengers will send their luggage in another way to the destination (for example by using a courier).



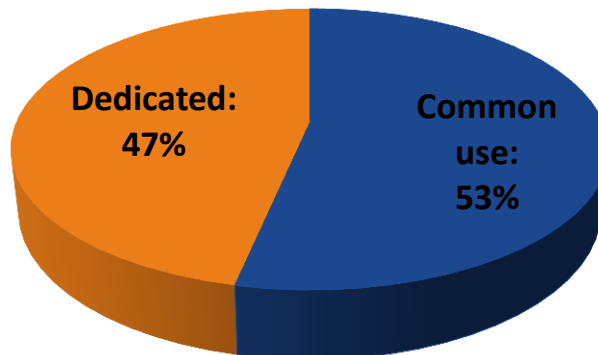
➤ Further research on attractive options will be needed

2. Check-In/ Bag-Drop

In 2025/30 it is possible to use self-service bag drop desks at more than 90 % of all Airports.

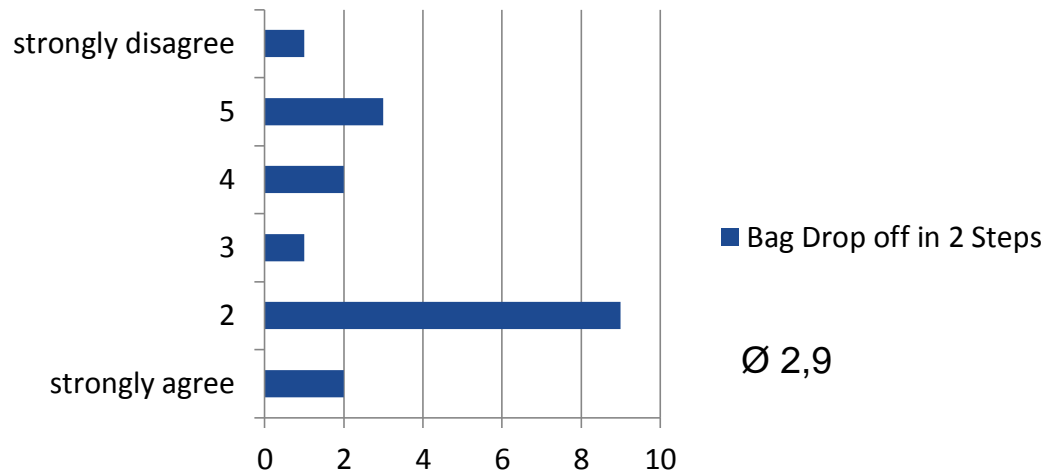


How large will be the percentage of common use towards airline dedicated self-service bag drop in 2025/30?

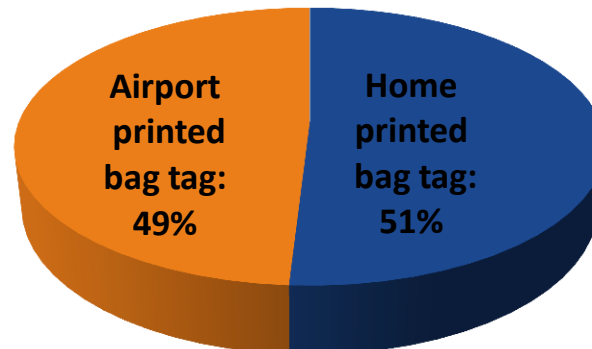


2. Check-In/ Bag-Drop

The self-service bag drop in two steps (First print the tag, then bag drop-off) will win out over the bag drop in one step.



How large will be the percentage of home printed or permanent bag tags compared to the bag tags which are printed at the airport in 2025/30?



Existing Check-In Halls



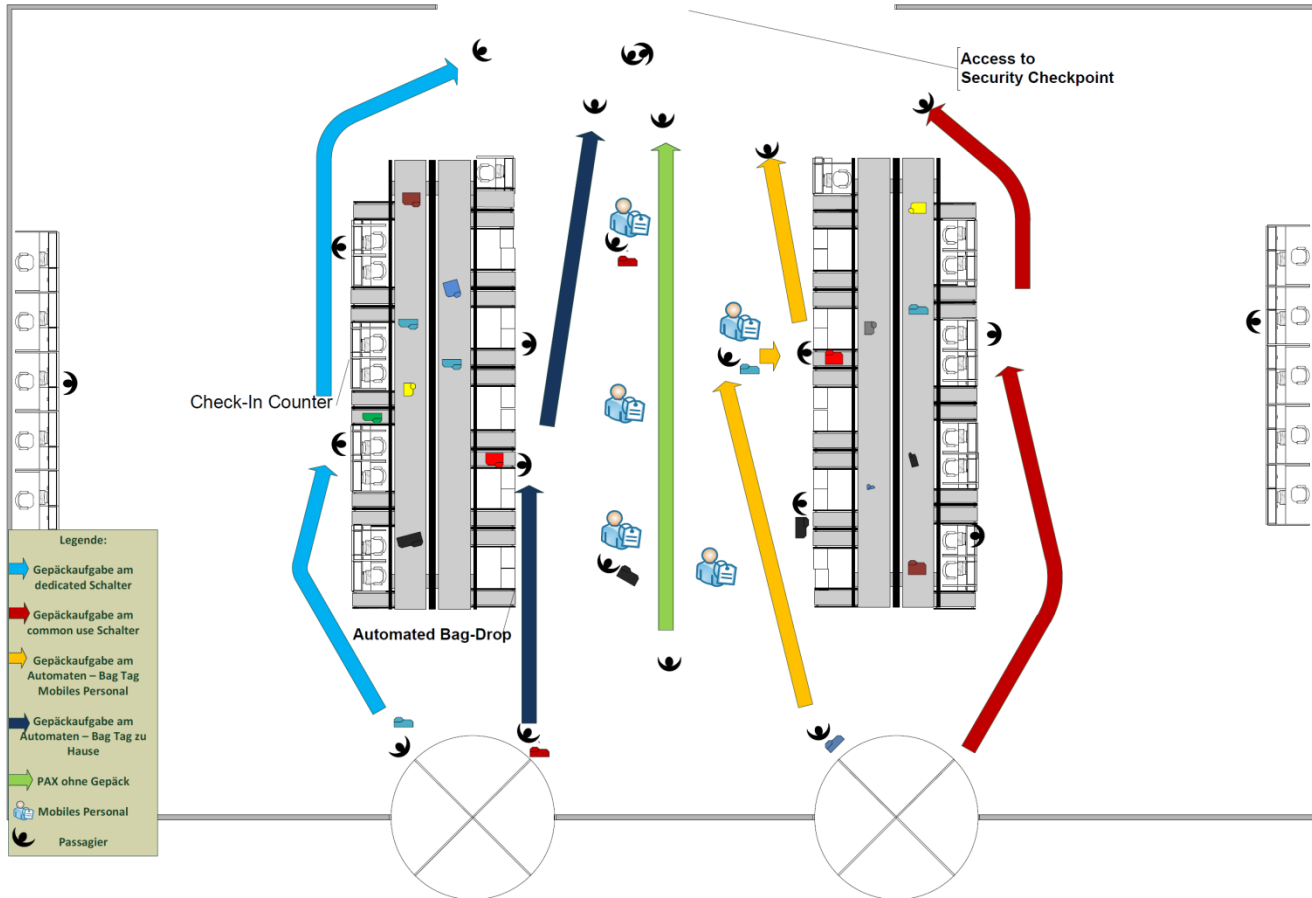
- Low utilization of Check-In counters through dedicated use
- Dependency on staff

Vision 2025/30: Check-In Hall of the Future



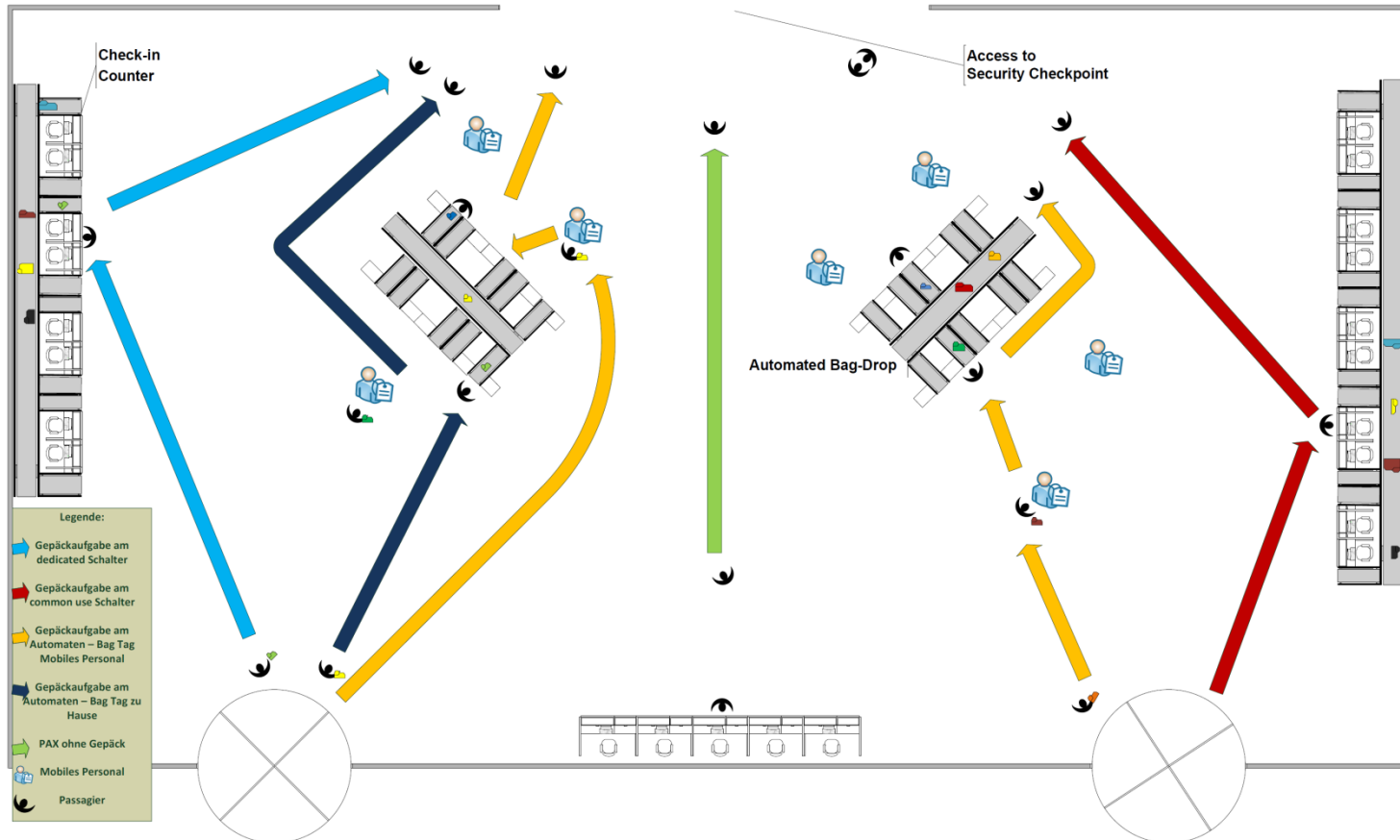
- New concepts for Check-In areas with a maximum of automation
- Modification of existing halls

Vision 2025/30: Check-In Hall of the Future



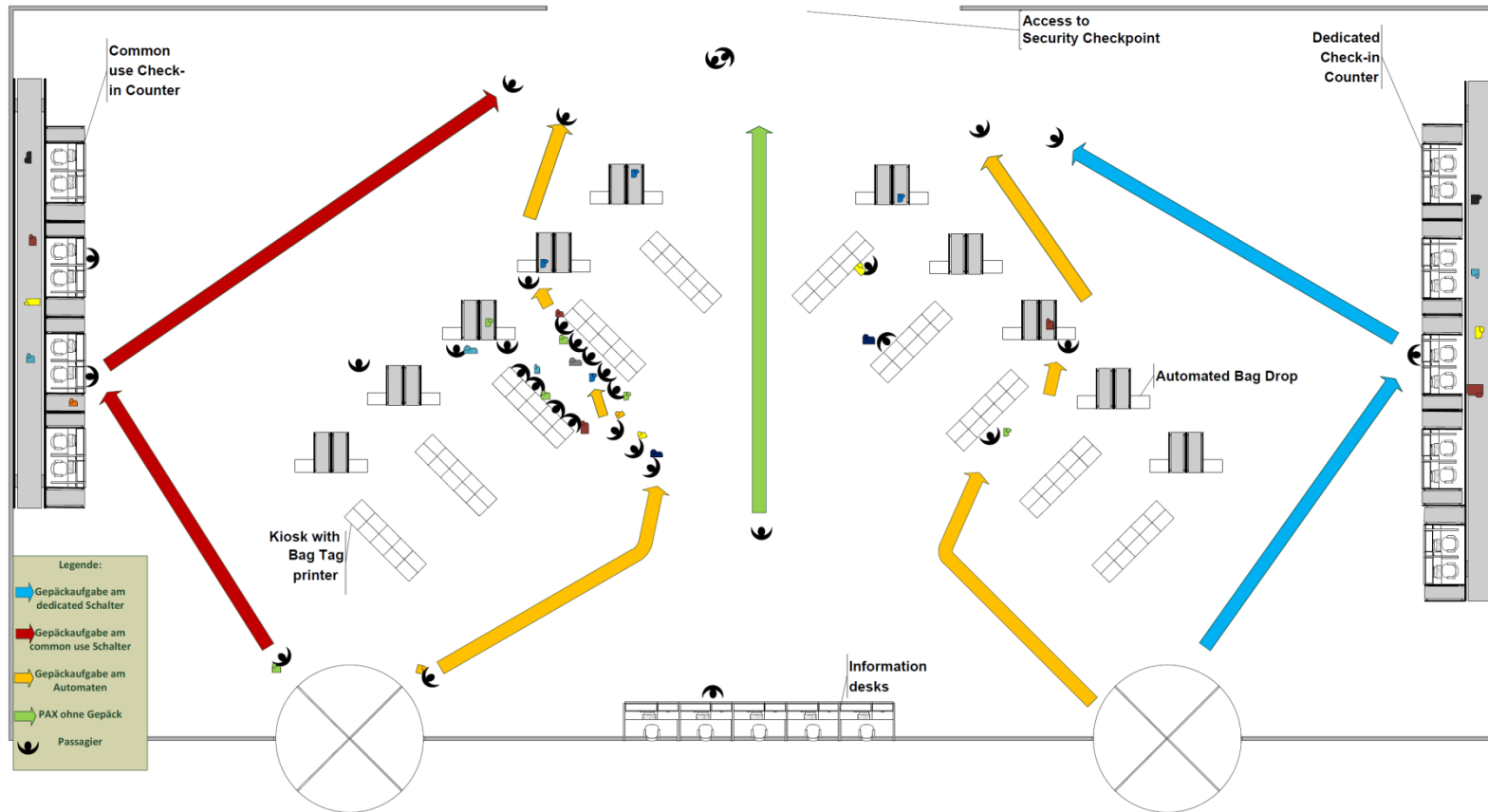
- 50% Common-use Automated Bag-Drop; bag-tag at home
- Modification of existing Check-In Hall; app. 50% less counters

Vision 2025/30: Check-In Hall of the Future



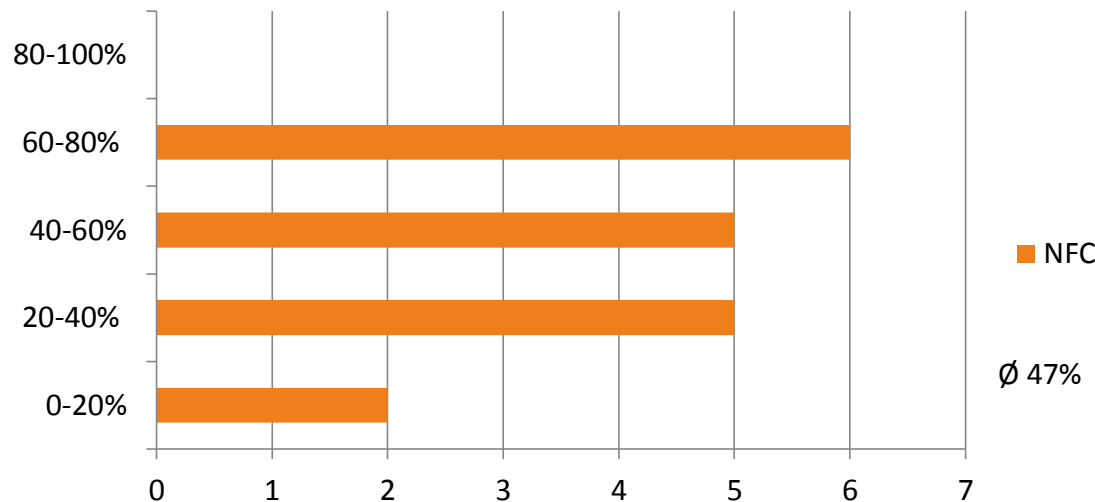
- 50% Common-use Automated Bag-Drop; bag-tag at home
- Reduced size of Check-In Hall with optimized passenger flow

Vision 2025/30: Check-In Hall of the Future



- 50% Common-use Automated Bag-Drop; bag-tag at kiosk
- Reduced size of Check-In Hall with optimized passenger flow

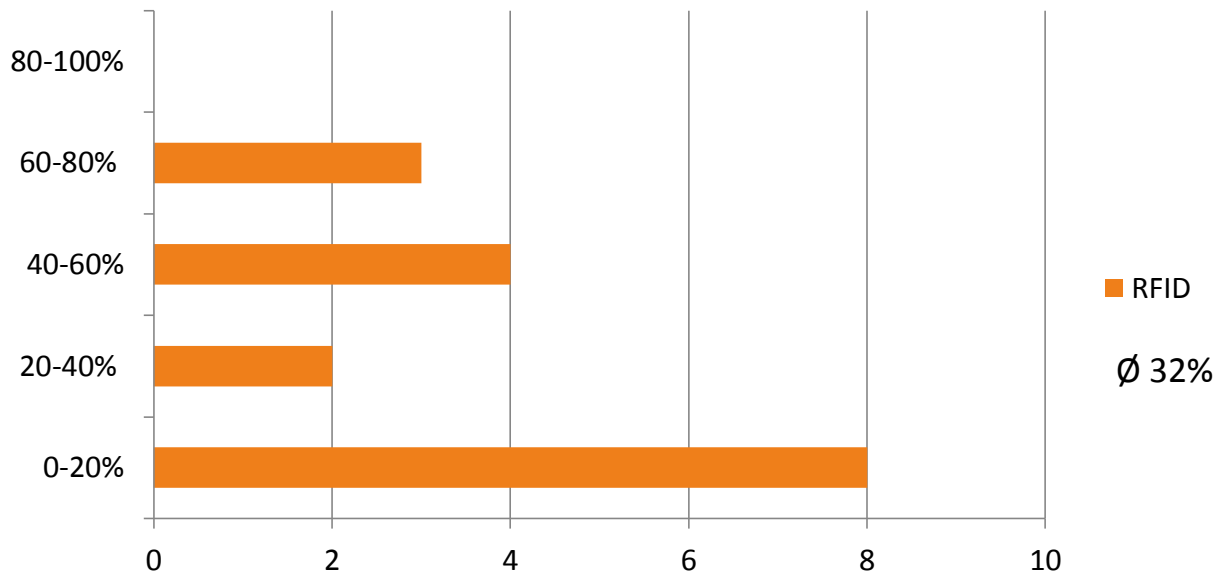
By what percentage of all passengers will NFC - Near Field Communication (in 2025/30) be used as a boarding-pass?



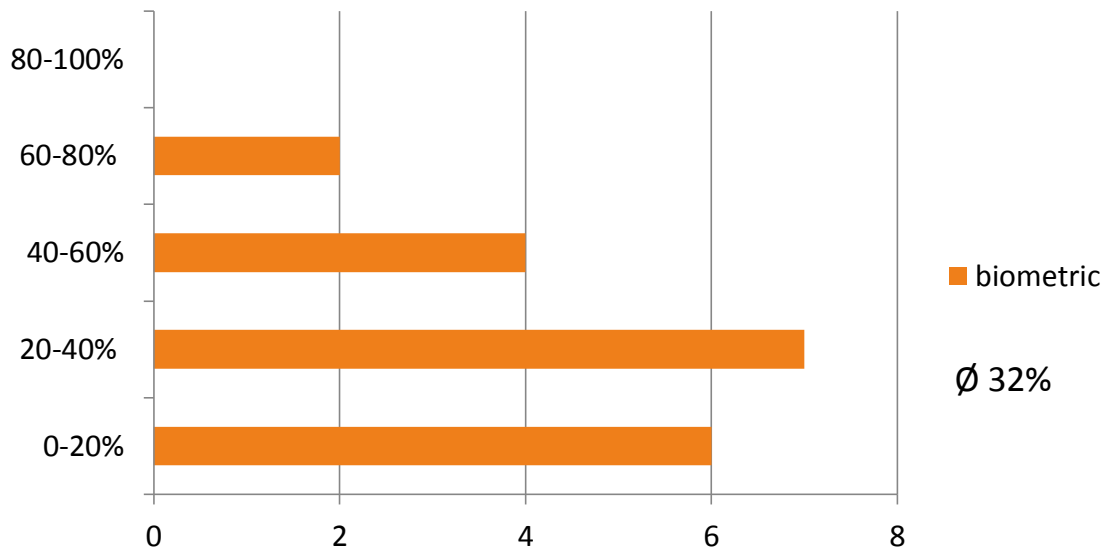
- Boarding and excess control will be faster with less staff
- Combined readers NFC, Barcode

3. Boarding-Pass/ Bag-Tag

By what percentage of all passengers will cards with an implemented RFID-Chip, containing the details of the boarding-pass, be used in 2025/30?

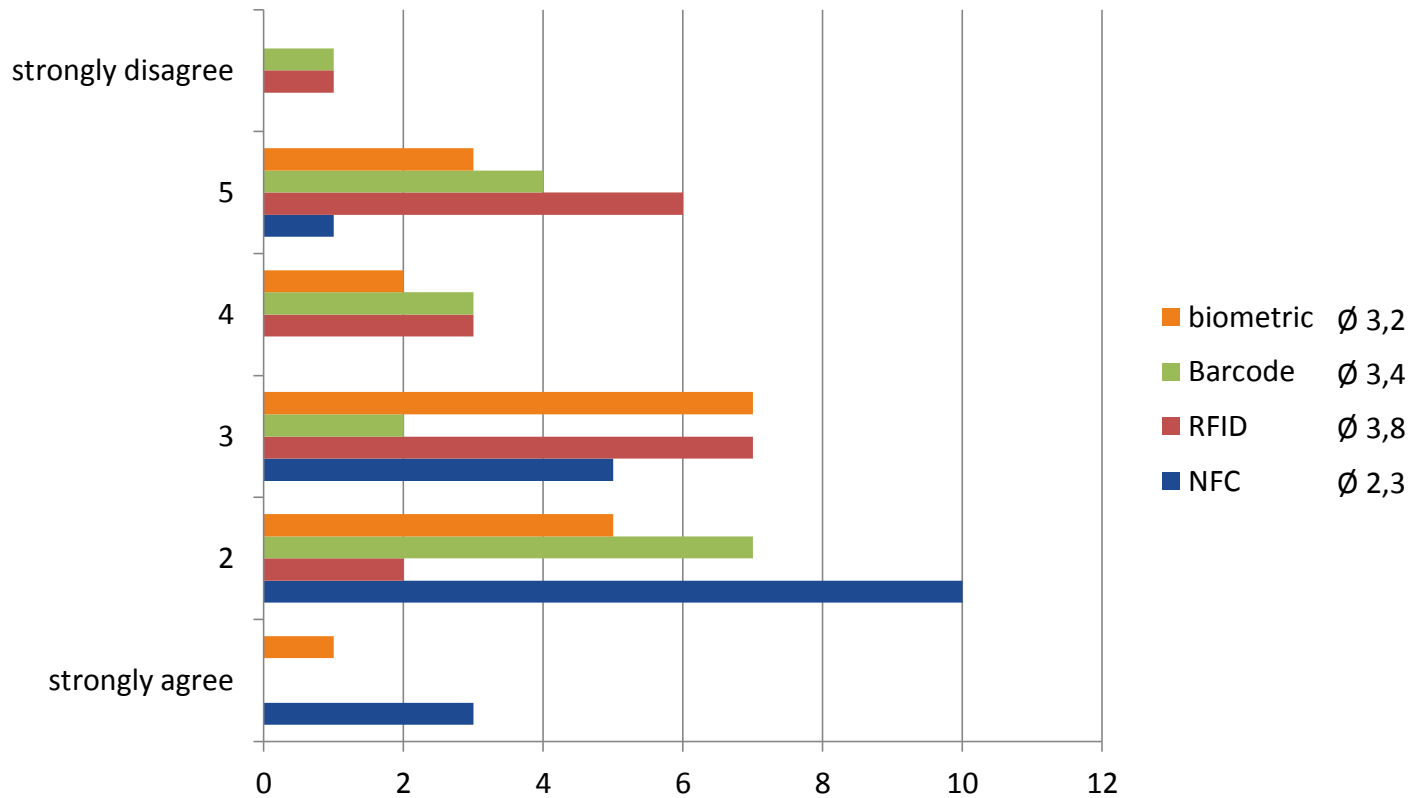


By what percentage of all passengers will biometric data be used instead of a Boarding-pass and for identification in 2025/30?



- Boarding and excess control will be slower than with NFC/RFID
- Registration required in advance or 2 step process
- Larger investment in reading devices

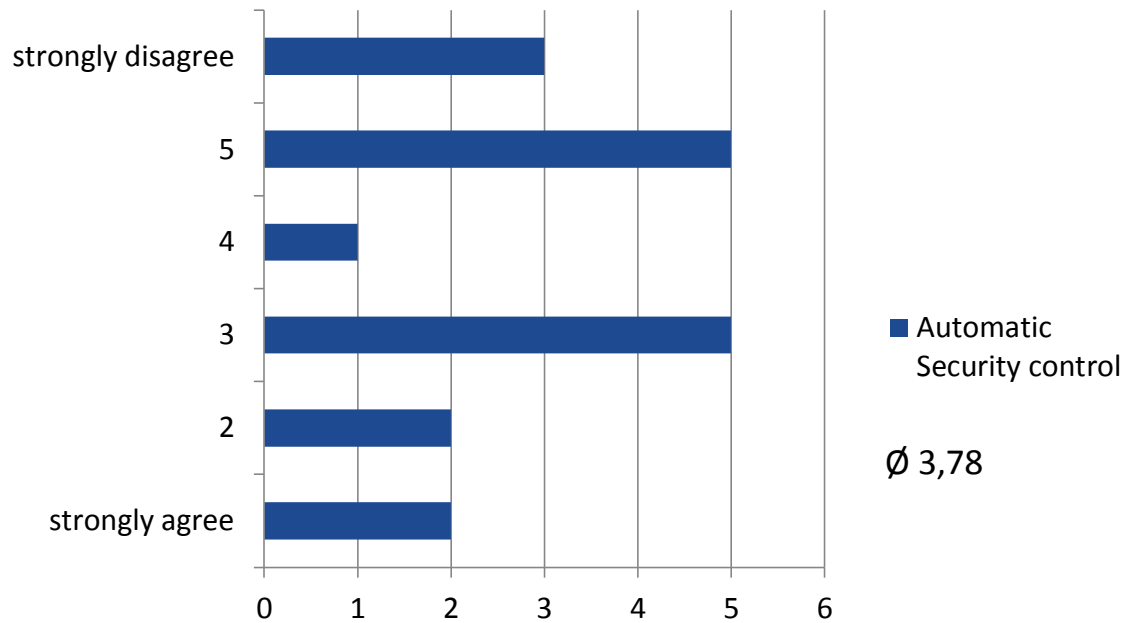
By what percentage of all passengers will biometric data be used instead of a Boarding-pass and for identification in 2025/30?



➤ Worldwide standard will be required for transfers

4. Checkpoints

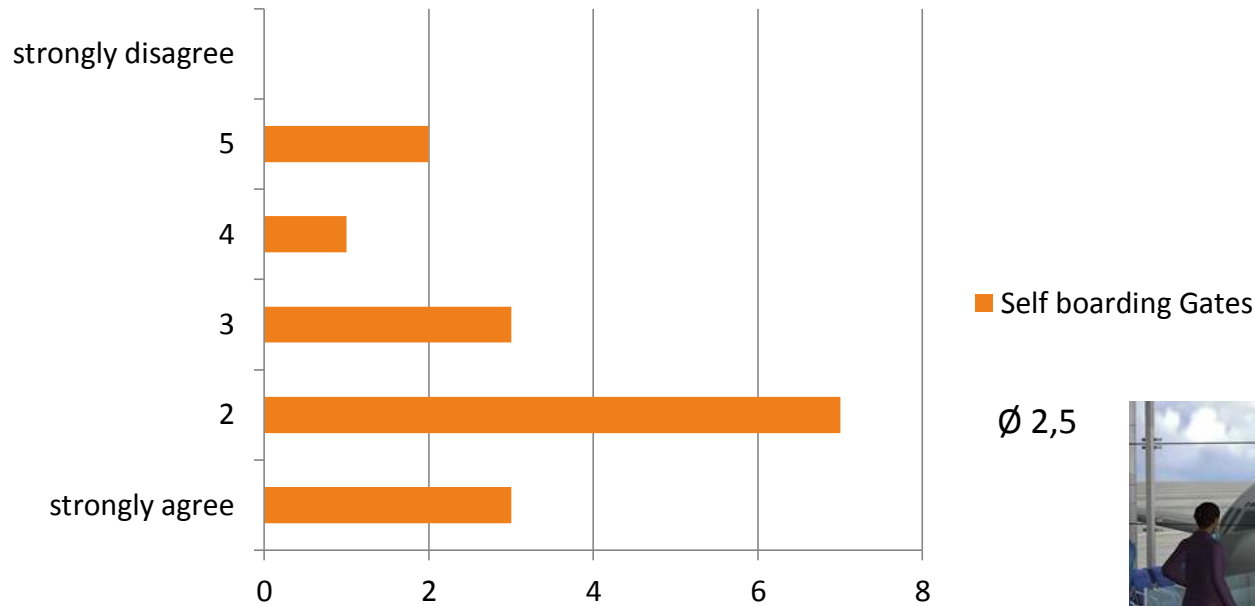
In 2025/30 there will be a system, which allows screening without forcing someone to stop or to drop-off the cabin luggage (ambient screening).



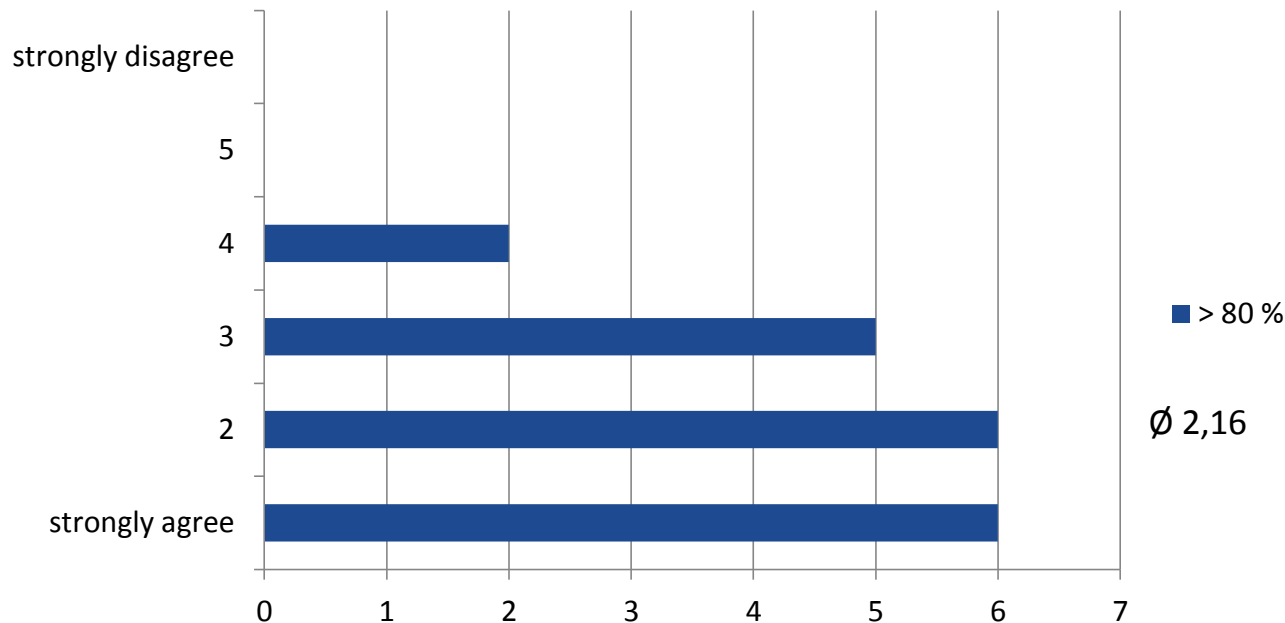
© IATA Checkpoint of the future

➤ Efficient checkpoint of the future concepts and technology might not be ready by 2025/30

In 2025/30 there will be Self-boarding Gates available at every Gate and passengers will have the possibility to use their biometric data to identify for the flight.

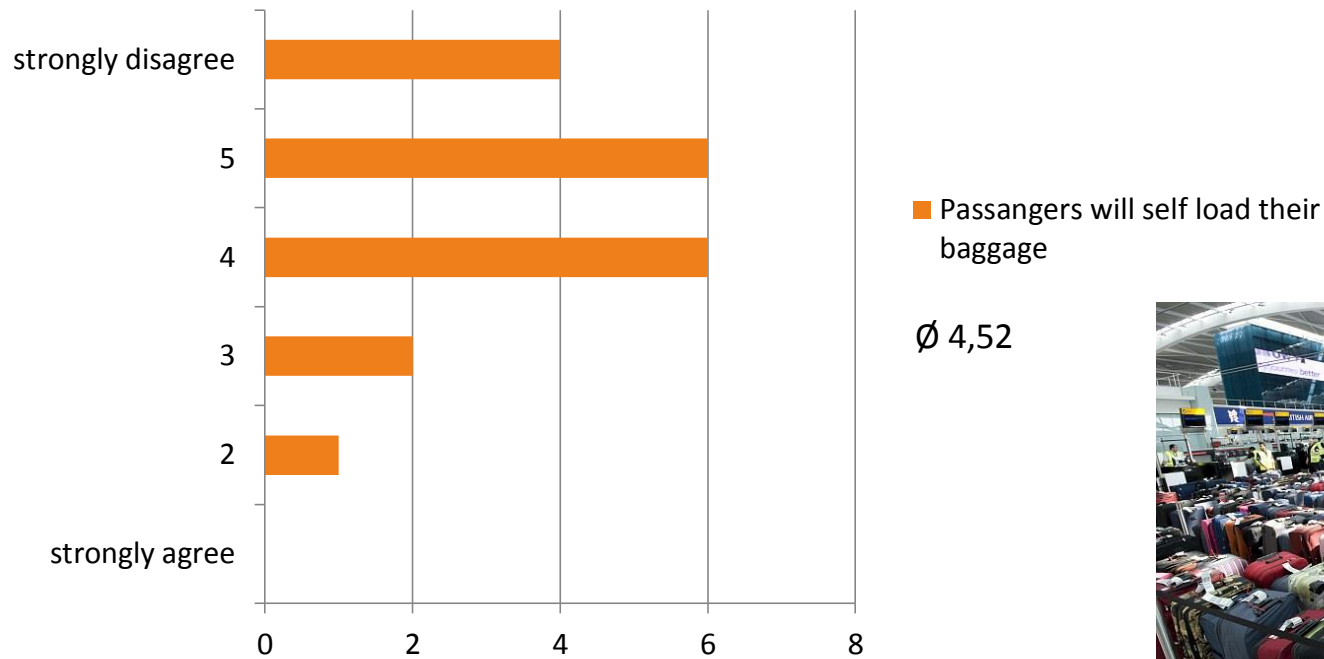


In 2025/30 there will be Indoor navigation systems with personalized information in place at more than 80 % of all Airports.



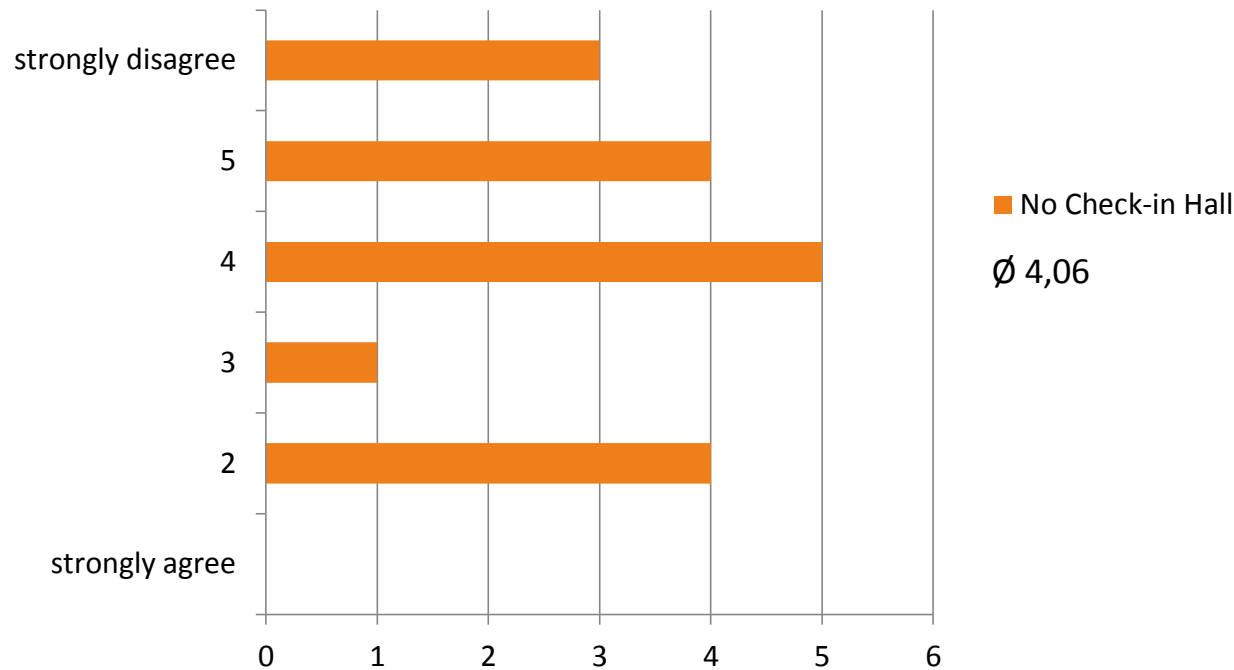
➤ Big improvement of the passenger experience without impact on the terminal infrastructure

In 2025/30 most of the passengers who fly with a Low Cost Airline will self-load their luggage into a container or directly carry it to the airplane themselves.



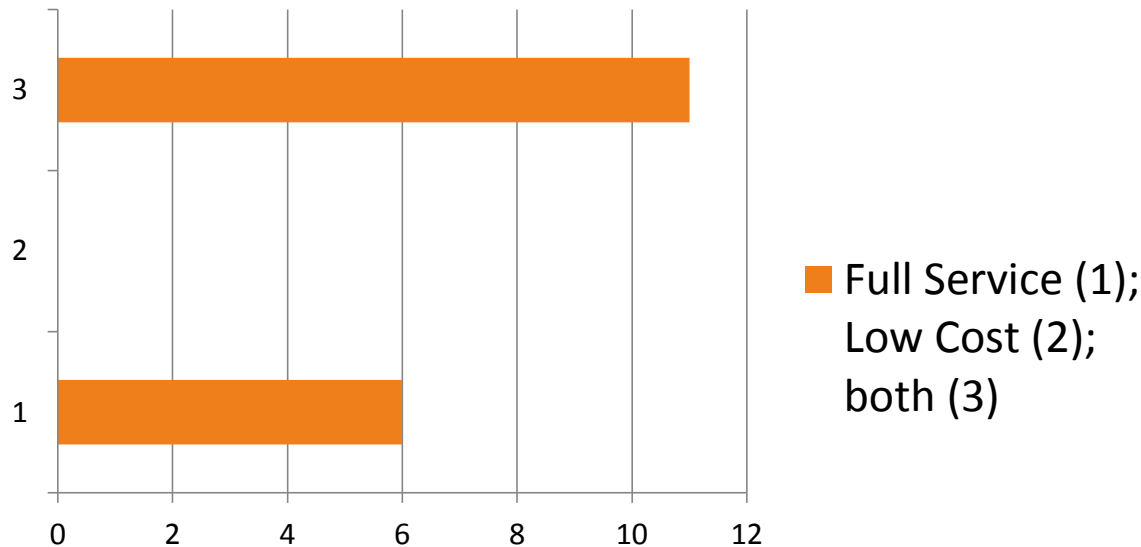
➤ Further research on the processes is needed

In 2025/30 Low Cost Terminals without a Check-In hall and without baggage handling system will be reality.



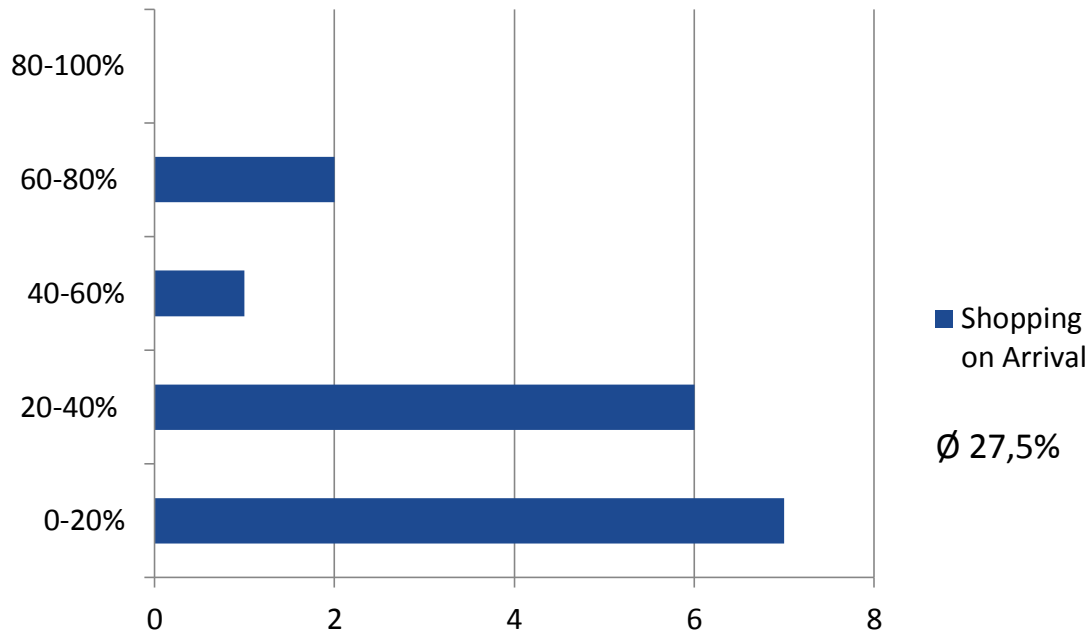
➤ Further research on the processes is needed

Which concept will succeed in the long term: “Full service Airport Terminals” (A) or “No service / low cost Airport Terminals” (B)?



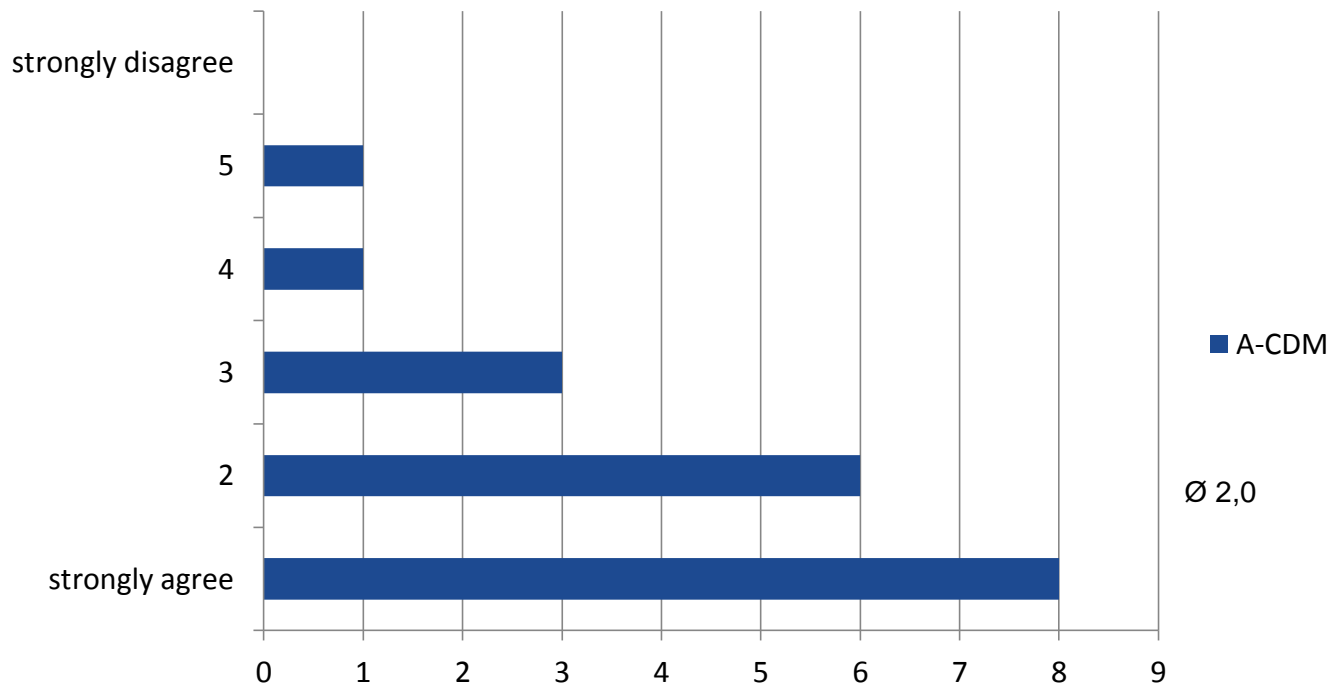
➤ The emergence of Low Cost terminals imposes some headwind on enhancing the passenger experience

Percentage of all passengers in 2025/30 who shop on arrival, especially if they have the possibility to order in advance online or on board the airplane?



➤ Shopping/collecting on arrival will require new processes and infrastructure for arrival areas

In 2025/30 the majority of Airports will have an A-CDM in place, which also incorporates the terminal processes.



➤ Standards could be developed for typical time stamps similar to airside processes

Topics for further Studies:

- Boarding Pass of the Future
 - What is the best long-term solution?
- Cost Terminals
 - Are Terminals without BHS possible?
 - Possibilities to enhance the Passenger Experience
- Arrivals Area of the Future
 - Processes and Infrastructure for Shopping/collecting on arrival
 - Baggage reclaim and information on individual arrival time of bag on belt



Thank you very much for your attention!

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