



# *Using apps for data collection and information provision*

Tim van Oijen

Other 4

**Details**

Name:

**Activities**

Name	Start	End
The Viper	27-08-2016 22:00	27-08-2016 23:00
Hard Driver	27-08-2016 21:00	27-08-2016 22:00
Frequencerz	27-08-2016 20:00	27-08-2016 21:00
NCBM	27-08-2016 19:30	27-08-2016 20:00

[Add activity](#)



# Crowdedness



**Cities**



**Festivals**



**Theme parks**

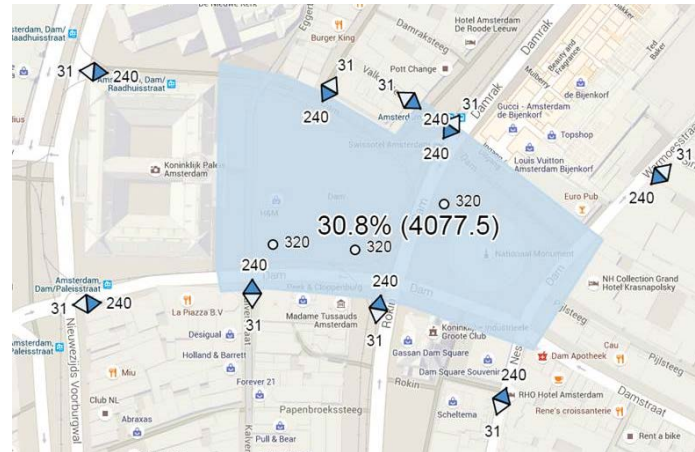


**Monitoring**

**Control**



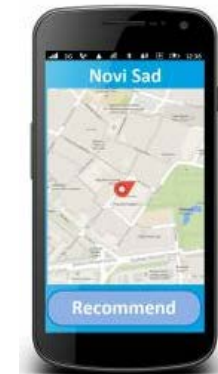
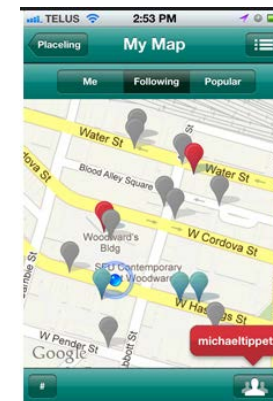
- Wifi-sensors
- Camera's
- Mobile apps (GPS / Bluetooth detection)
- GPS-trackers



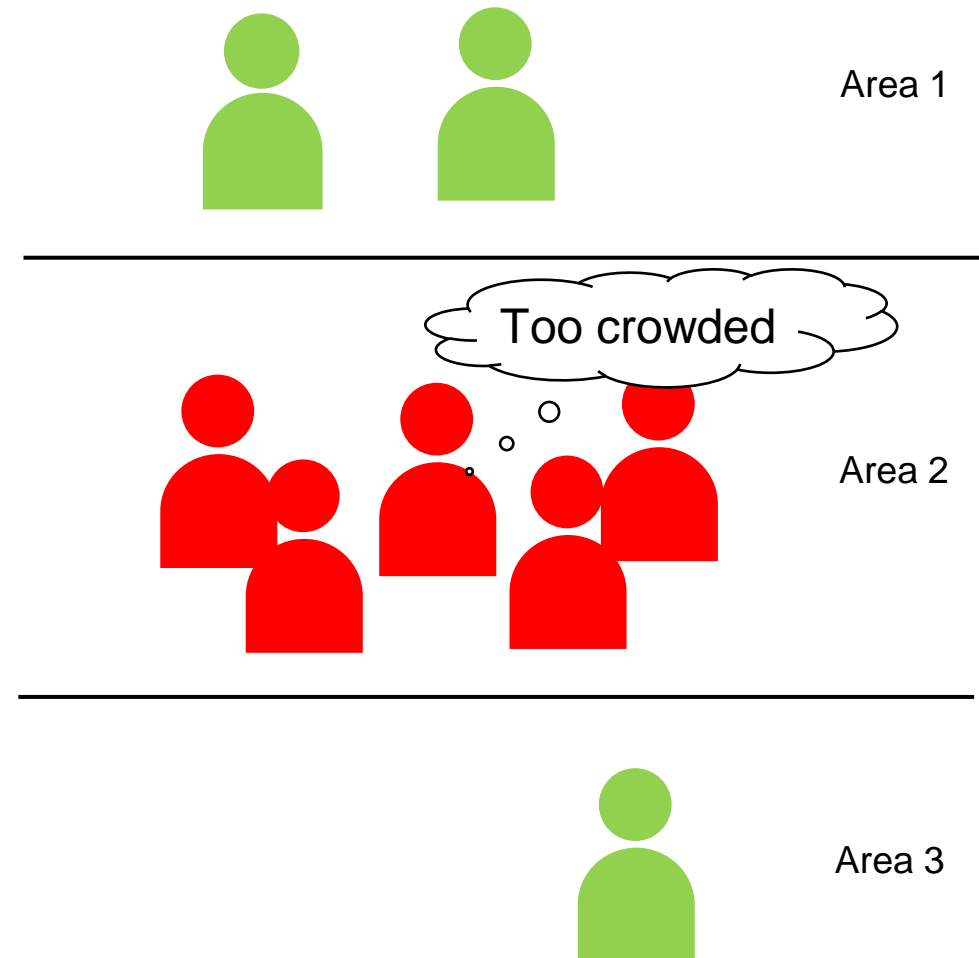
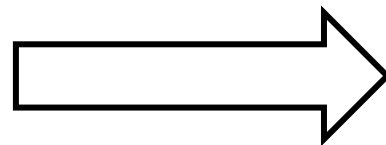
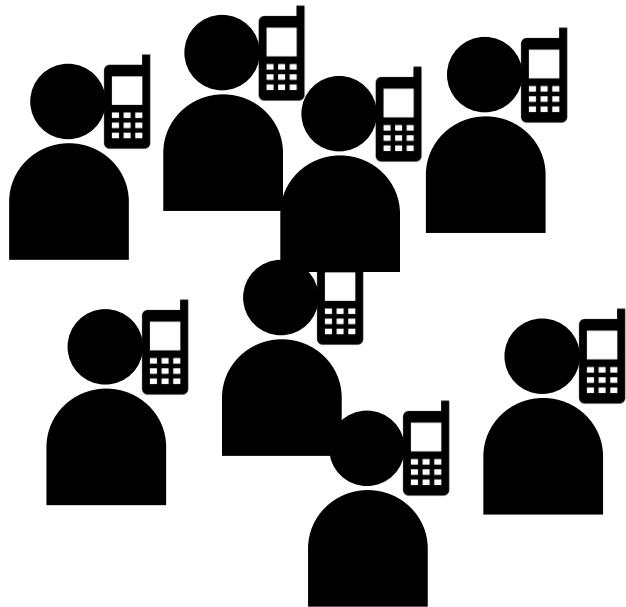
# Crowd control



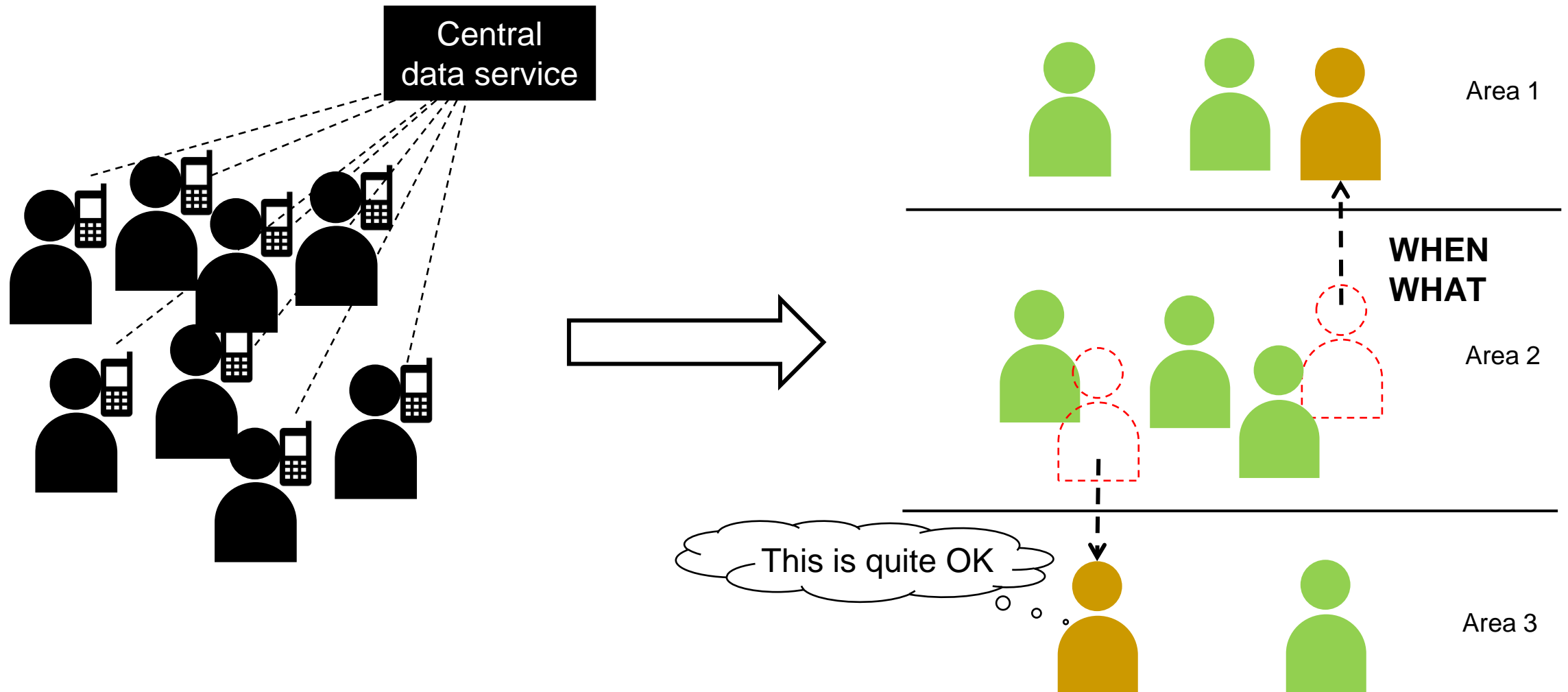
?



# *Choice behaviour with individual objective advise*



# *Choice behaviour with system objective advise*



Development and analysis of a system-efficient activity scheduling tool

- When do we advise people?
  - Type of advise
- What do we advise people?
  - User preference prediction and optimization algorithms



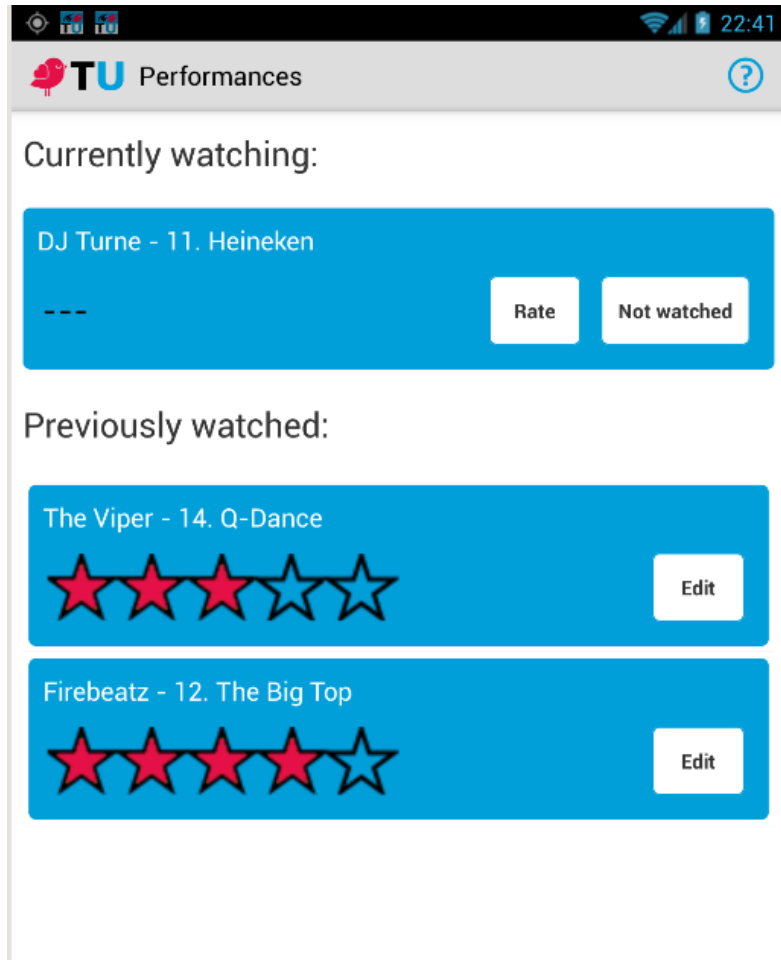
# Mysteryland 2016



- Pilot-study for data collection and user interaction with a mobile app.
- Goal: **Hands-on experience**
- Subgoals:
  - Get indication of natural activity choice behaviour (**WHEN**)
  - Get indication of predictability of preferences (**WHAT**)



# *The app – Main screen: performance overview*



- Xamarin Android app (C# development framework)
- Rate current or previously watched act
- Incorrectly recognized act can be deleted

# The app – Next activity view

A screenshot of a mobile app interface titled 'Next performance planning'. The screen prompts the user to 'Please select your next intended activity' and provides instructions: 'You can select a performance from a stage or another activity under the category 'Other''. The interface features a list of stages, each with a blue header bar and a list of performances below it. The stages are numbered 1 through 12. Stage 5, 'Bollywood Bar', is currently selected. At the bottom, there are 'Confirm' and 'Cancel' buttons.

Next performance planning

Please select your next intended activity

You can select a performance from a stage or another activity under the category 'Other'.

- ▼ 1. Desperados
- ▼ 2. Mainstage
- ▼ 3. Radio Noet Noet
- ▼ 4. Dave Clarke Presents
- ▲ 5. Bollywood Bar
  - Taylan Alan & Martinos Tsavidis Sat 18:00 - 20:00
  - Frits Wentink (live) Sat 20:00 - 21:00
  - Baba Stiltz Sat 21:00 - 23:00
- ▼ 6. Elrow
- ▲ 7. Vieze Poezendek
  - Bush Bush Sat 17:00 - 18:30
  - Christal Empire Sat 18:30 - 20:00
  - Hey Girl Hey Sat 20:00 - 21:30
- ▼ 8. Milkshake Supertoys
- ▼ 11. Heineken
- ▼ 12. The Big Top

Confirm Cancel

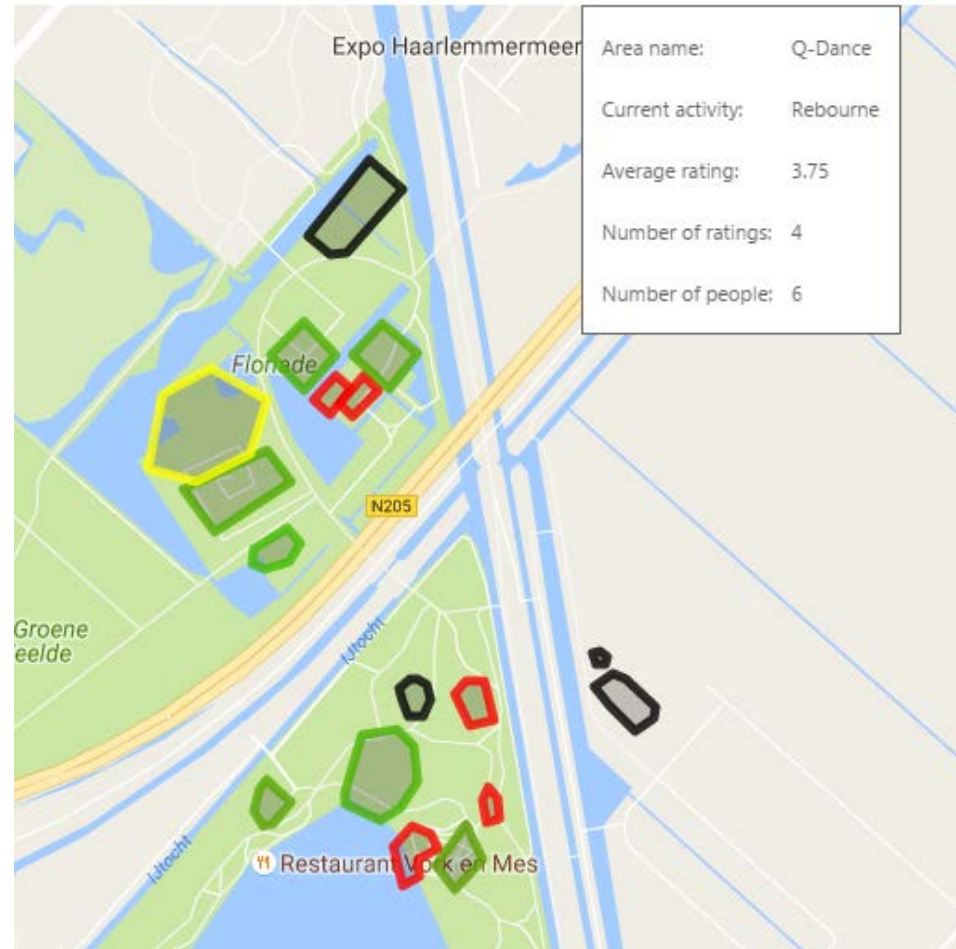
- Select a next performance you want to watch.
- Click on the stage first, then click the performance.
- A category Other exists as well.

# The experiment - 1



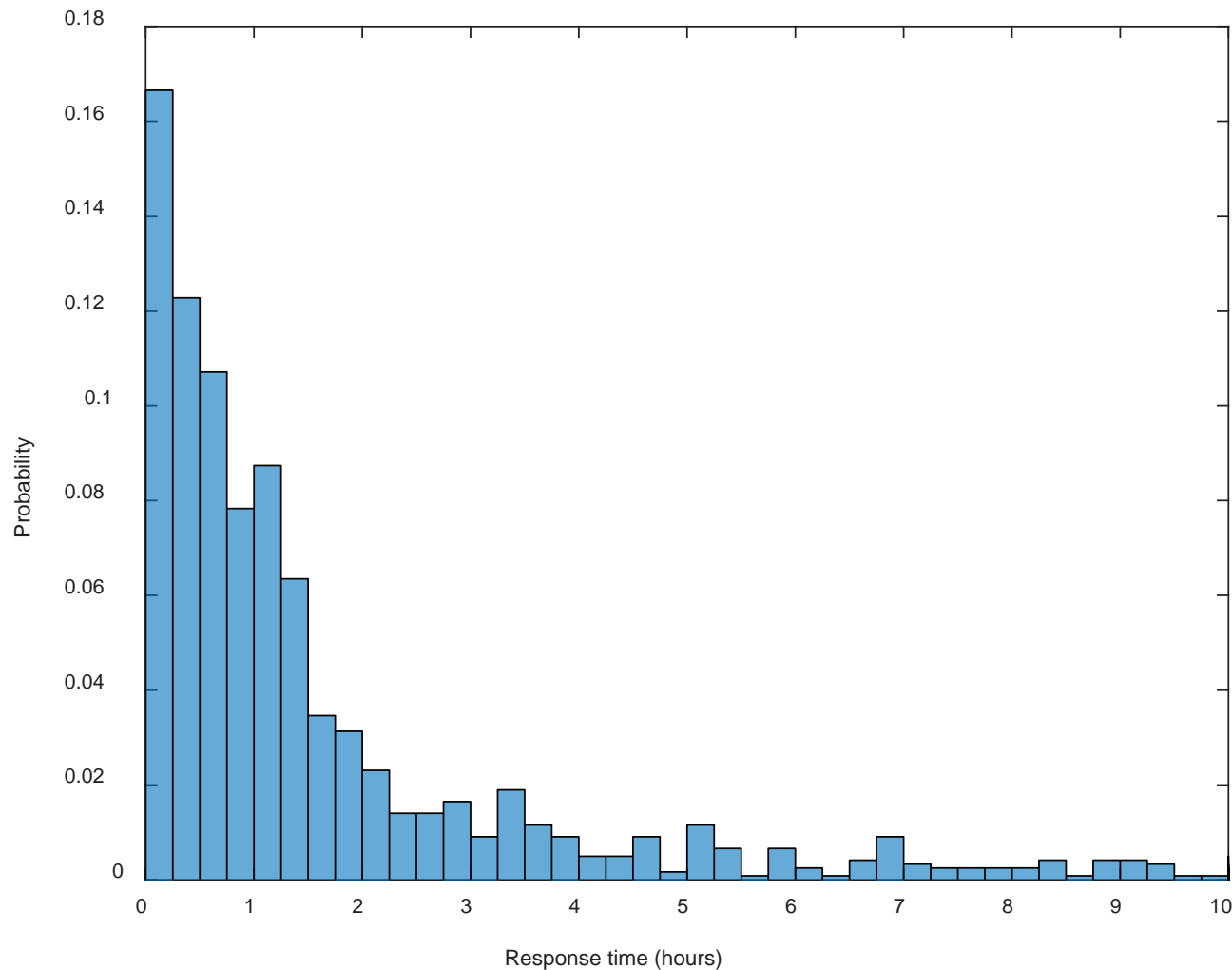
- Mysteryland Facebook invitation
- Almost 200 respondents
- Also recruitment at the festival
- In total only around 110 people who cooperated → A bit more than 80 at least one rating.

# The experiment - Dashboard





# Preliminary Results – Response time

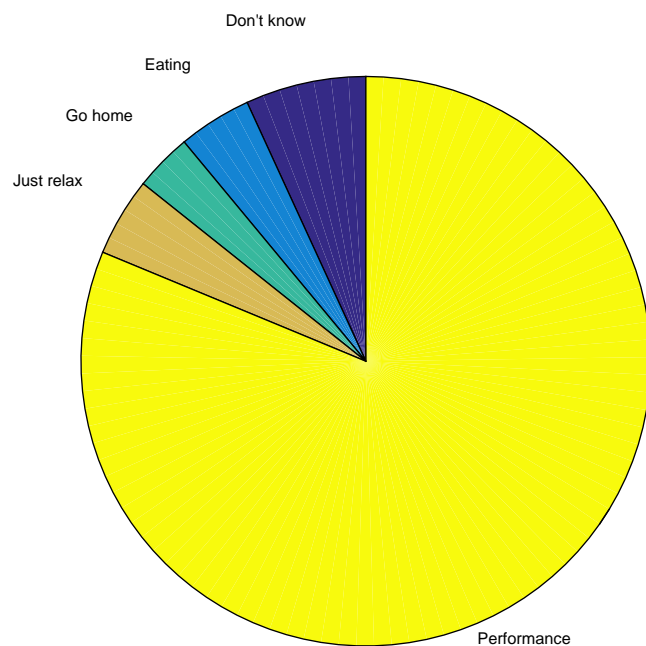


- Less than 30% responds to the rating request notification within 30 minutes

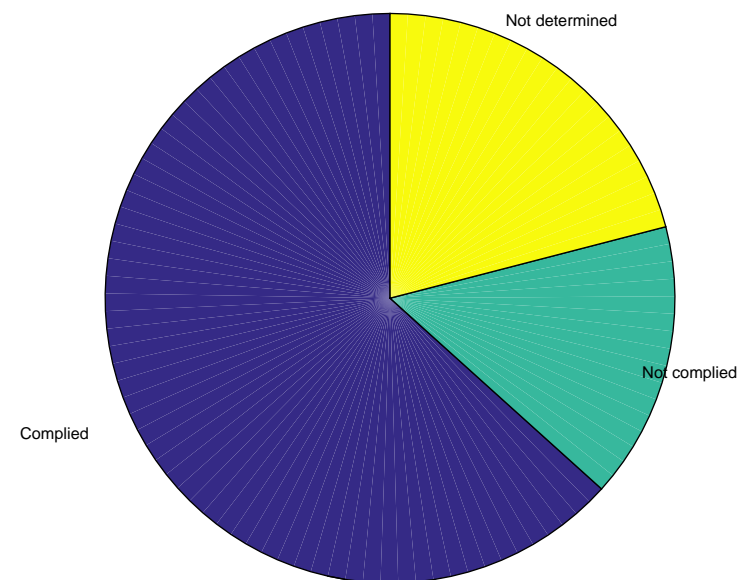
# Preliminary Results – Planning



## Next intended activity



## Compliance in case of performance



# *Next steps*



- Extend the app to give advise as well (not system-optimal yet) → Measure and predict compliancy
- Develop algorithms to generate system-optimal advise, treating predicted user compliancy as a constraint
- Find a new application case (theme park, another festival, city?)

# *Relevance – System perspective*



**Cities**



**Festivals**



**Theme parks**



**Safety**

**Performance**



## DISTRACTION





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## Details

Name:

Q-Dance

## Activities

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Add activity



# *Preliminary Results*



## **Some facts:**

- Most rated act: Kutski (Q-dance) → **34 ratings**
- Best rated act (5 or more ratings): Michel de Hey & Benny Rodrigues (Elrow) → **4.8 (out of 5)**
- Most active user: Id 70 → **50 ratings**

# Results - 2

