Université Gustave Eiffel

Final event
Conclusion

May 13th 2024

Conclusions of SORTEDMOBILTIY

Self-organizing railway traffic **may be an option**

It would require big changes in regulations and contractualizations, but in some cases it may we worth it

In our results, the performance of the system are at least **as good** as with a centralized optimized management

The path is open for further exploration, and **realistic simulation assessment** is crucial

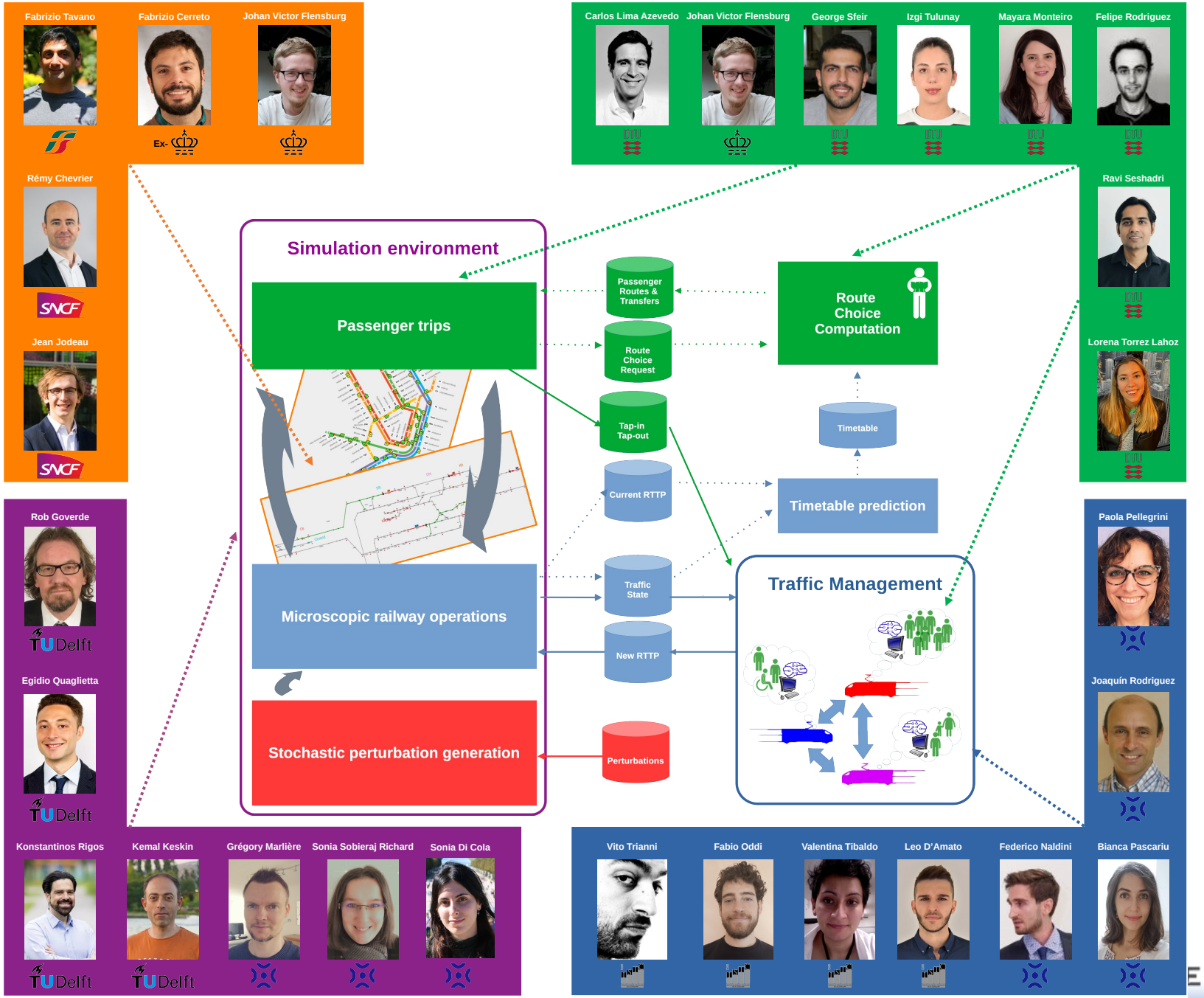
Open questions

Several questions remain open:

- How may different designs for the various modules influence the system?
  - situation-specific neighborhood definition?
  - possibility of making additional RU-proper decisions?
  - more advanced consensus approaches?
  - ...
- How does the network structure and traffic density impact the performance?
- How shall prediction boundaries be set?
- Shall a completely self-organized system be the target, or some place for centralized decisions shall be preserved?
- ...

Lessons learned

- Dealing with real data always remains a very big challenge
- Industry-academia collaboration, independent on any commercial product development, is crucial for preserving real exploratory research
- Main factors for the success of exploratory research projects:
  - funding opportunities
  - good ideas
  - passionate teams


Fabrizio Tavano
Fabrizio Cerreto
Ex-
Johan Victor Flensburg
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Carlos Lima Azevedo
Johan Victor Flensburg
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Mayara Monteiro
Felipe Rodriguez
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Lorena Torrez Lahoz
Simulation environment
Passenger trips
Microscopic railway operations
Stochastic perturbation generation
Passenger Routes & Transfers
Route Choice Request
Tap-in Tap-out
Current RTTP
Traffic State
New RTTP
Perturbations
Route Choice Computation
Timetable
Timetable prediction
Traffic Management
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Thank you!

For later questions and comments

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