

# Chaire *Call Centers* 2016+

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## Les chercheurs



Benjamin Legros  
Chercheur



Oualid Jouini  
Professeur



Ger Koole  
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## Le sponsor



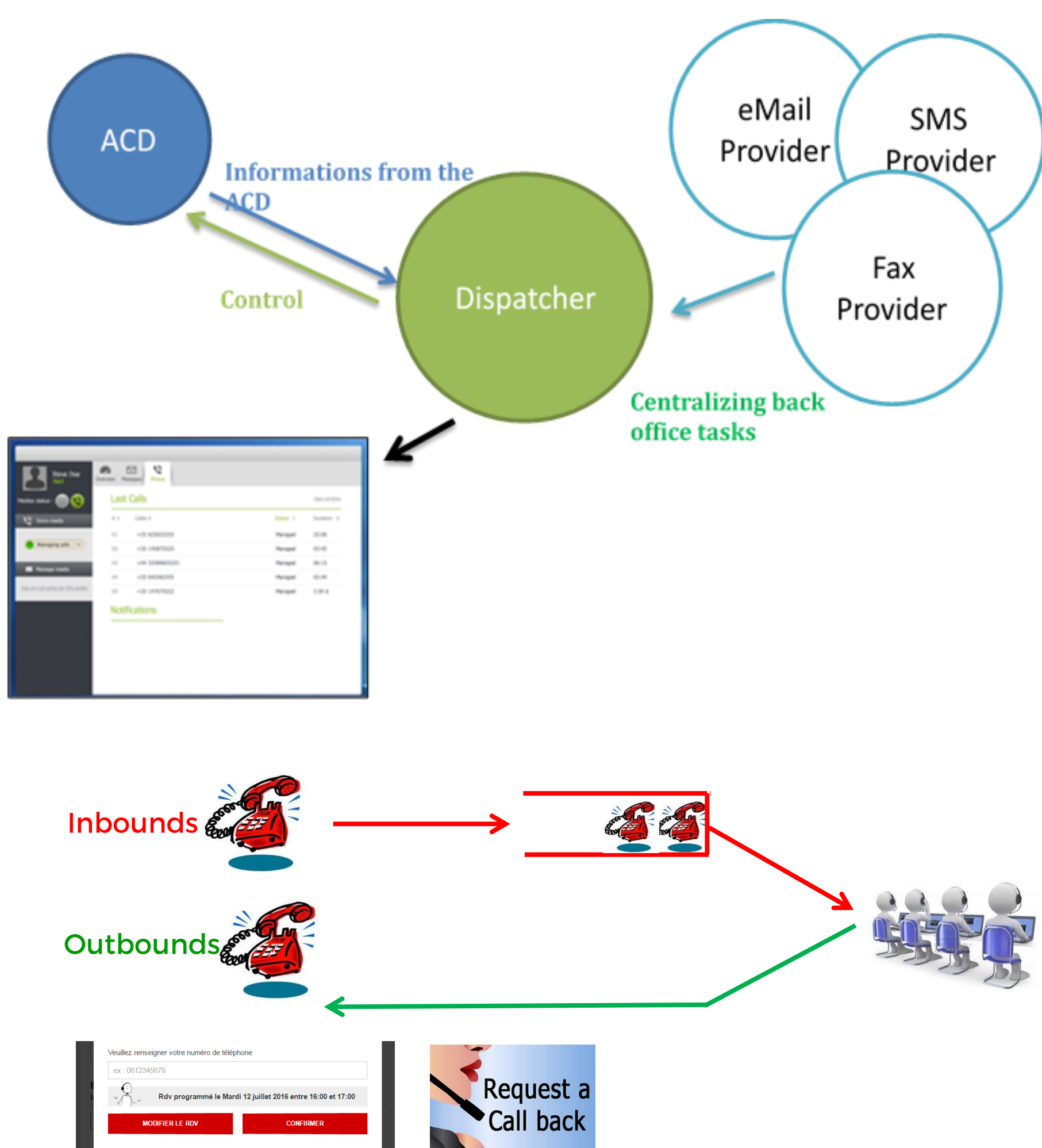
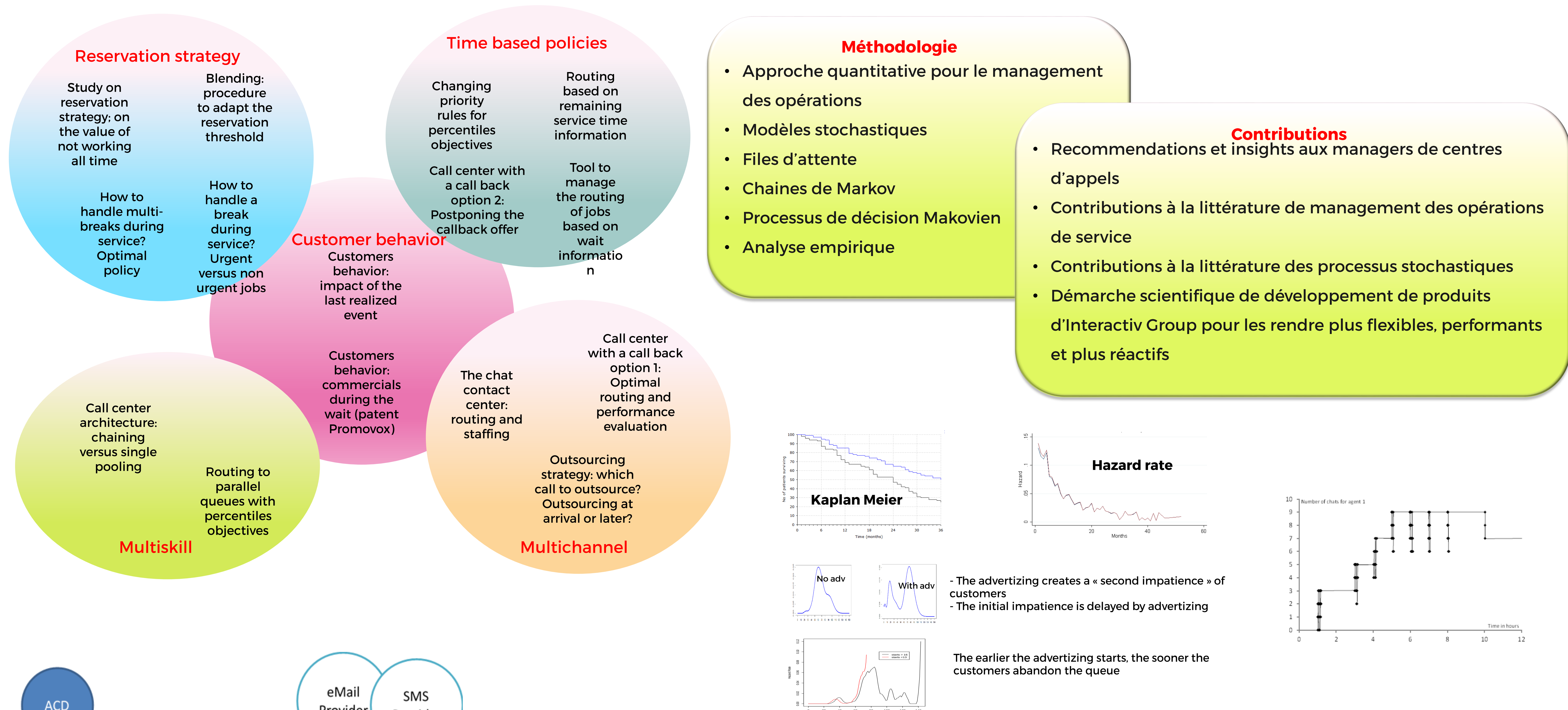
- Editeur de solutions pour les centres d'appels
- Management d'interactions digitales
- 60 collaborateurs
- CA 14 Million EUR en 2016
- Clasée 9ème par DELOITTE FAST50 2016

## Les publications

- B. Legros, O. Jouini, G. Koole. Optimal Scheduling in Call Centers with a Callback Option. *Performance Evaluation*, 95:1-40, 2016.
- B. Legros and O. Jouini. Routing in a Queueing System with two Heterogeneous Servers in Speed and in Quality of Resolution. *Stochastic Models*, 33(3):392-410, 2017.
- B. Legros, S. Ding, R. van der Mei and O. Jouini. Call centers with a postponed callback offer. *OR Spectrum*, 39(4):1097-1125, 2017.
- B. Legros, O. Jouini and G. Koole. Blended Call Center with Idling Times during the Call Service. *IIE Transactions*, 50(4):279-297, 2018.
- B. Legros, O. Jouini and G. Koole. A Uniformization Approach for the Dynamic Control of Queueing Systems with Abandonments. *Operations Research*, 66(1):200-209, 2018.
- B. Legros and O. Jouini. On the Scheduling of Operations in a Chat Contact Center. *European Journal of Operational Research*. In press, 2018.

## La recherche

### Thème de recherche: *Optimisation des flux dans les centres d'appels multi-canaux*



### Some insights

- Time based routing outperforms Quantity based ones when percentiles are involved
- Reservation is a way to be more efficient for one objective by neglecting the others
- The stationnary regime is reached when the interevent time is 100 shorter than the time of observation. It is reached quicker when the call center is large
- Combining different skills/channels in one call center team can be counterproductive due to switching times if efficient routing strategies are not implemented
- The FCFS discipline may not be appropriate when percentiles are involved; by given priority to customers with short wait the staffing can be reduced
- Using the remaining service time distribution information is the best tool to manage an outbound contact center
- The call back option allows the call center to reduce the effect of the variability at arrival
- It is preferable to outsource calls after letting them wait instead of taking decisions at arrival based on expectations