

**UIC DIGITAL DAY**



**7 October 2016**  
**Paris UIC Headquarters**



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**Paris, 7 October 2016**



***Innovation in station:***

***Collaborative automated luggage handler robot.***



**Gares &  
Connexions**



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*Each traveler  
has luggage*



**Bulky luggage**



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**Several luggage  
per passenger**



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**Person with Reduced  
Mobily (PRM) also  
have luggage**



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**Problematic** of the reception of Person with Reduced Mobility (PRM) in station :

- **Occupational health risks** for railway employees (backache due to transport of heavy luggage all day)
- **Waiting time of PRM** at the entrance to the station or arrival by train (due to the availability of railway employees)



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**Solution : Collaborative automated luggage handler robot assisting a railway employee that receives a PRM by following him automatically**

## Objectives :

- **Best comfort for railway employees**
  - **no backache for railway employees** because no luggage to transport. This is done by the robot.
- **Best reception of PRM**
  - **reduced waiting time of PRM** because railway employees divide up reception (1 employee for PRM, no need to have several employees for 1 PRM)
  - **Quality reception** : Railway employee is fully available for PRM



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# Innovation at



Gares & Connexions





# EffiBOT

Collaborative automated luggage handler robot.

 *Railway employee*

*Luggage* 



- **FOLLOWS OPERATOR**
  - **MAX SPEED 7 KM/H**
  - **EASY TO USE**
- **OBSTACLE AVOIDANCE**

*EffiBOT* 

# EffiBOT HANDLING ROBOT



payload up to 300 kg

slope up to 30%

length 125 cm, height 55 cm  
width 65 cm

6 to 8h of use  
Lithium batter48V

2 or 4 wheel drive  
BLDC 48V 570 à 1800 W total

7 or 18 km/h

weight 100 kg or 150 kg

50 or 80 cm wheelbase



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# EffiBOT HANDLING ROBOT



*“ Follow-me ”*

*“ Precede-me ”*

*“ Symmetric robot ”*

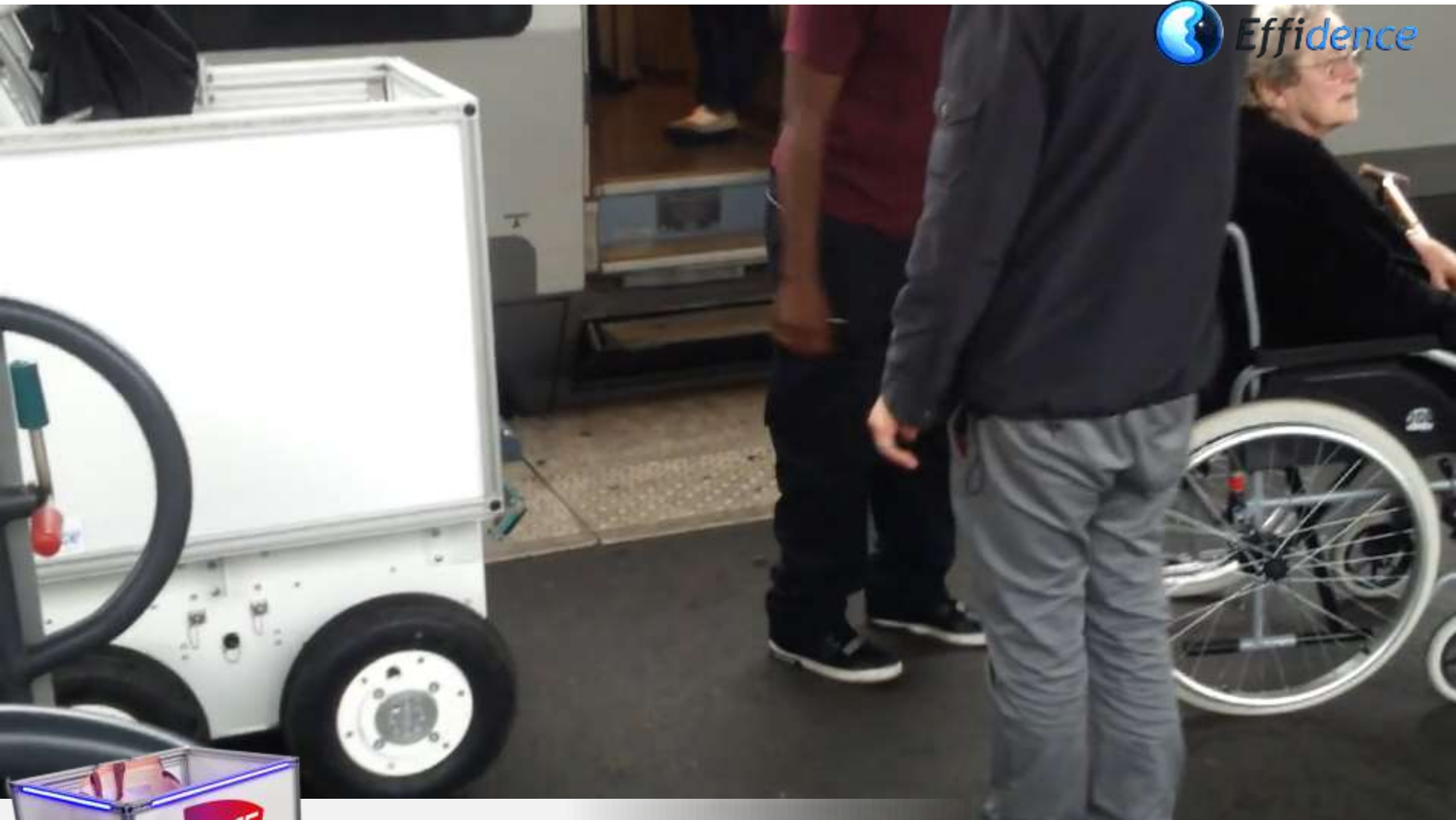
*“ 360° tracking ”*





# EffiBOT

Collaborative automated luggage handler robot.



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# Other railway applications of autonomous robots



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## Autonomous mode :

- Follow-me
- Conveying between two positions



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## Autonomous mode :

- Follow-me
- Conveying between two positions



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Who we are ?



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- **French technological SME** of 11 employees , founded in **2009** by Dr-Ing Cédric TESSIER
- Designs and markets autonomous and collaborative **mobile robot** & autonomous navigation **system**
- Reecognized for our technological innovation of **follow-me robots**
- A development which relies on a network of international integration **partners**



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- People or car following
- Autonomous conveying between two positions
- Automatic guidance

*For any robot or vehicle*

Tracks



Electrics



Wheels



Diesel





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<https://www.youtube.com/user/Effidence/playlists>



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