

INTRODUCTION  
**ELECTRICITY**  
DAT 255  
2016.04.13

Göran Smith



# Agenda

- **14.00 - 14.15** Introduction to ElectriCity
- **14.15 - 14.30** Introduction to Challenges

# INTRODUCTION TO ELECTRICITY



# ElectriCity

- **Background**

- Goal: Double modal share of public transport
  - *Reduce environmental impact*
  - *Reduce congestion*
  - *Increase equality*
- Goal: Improve public transport performance
  - *Reduce environmental impact*
  - *Reduce local pollution (noise & particles)*
  - *Reduce accidents*

- **Purpose**

- *"An arena for demonstrating new products and services within public transport"*
- *"A source of inspiration and a motivation force for future urban development"*





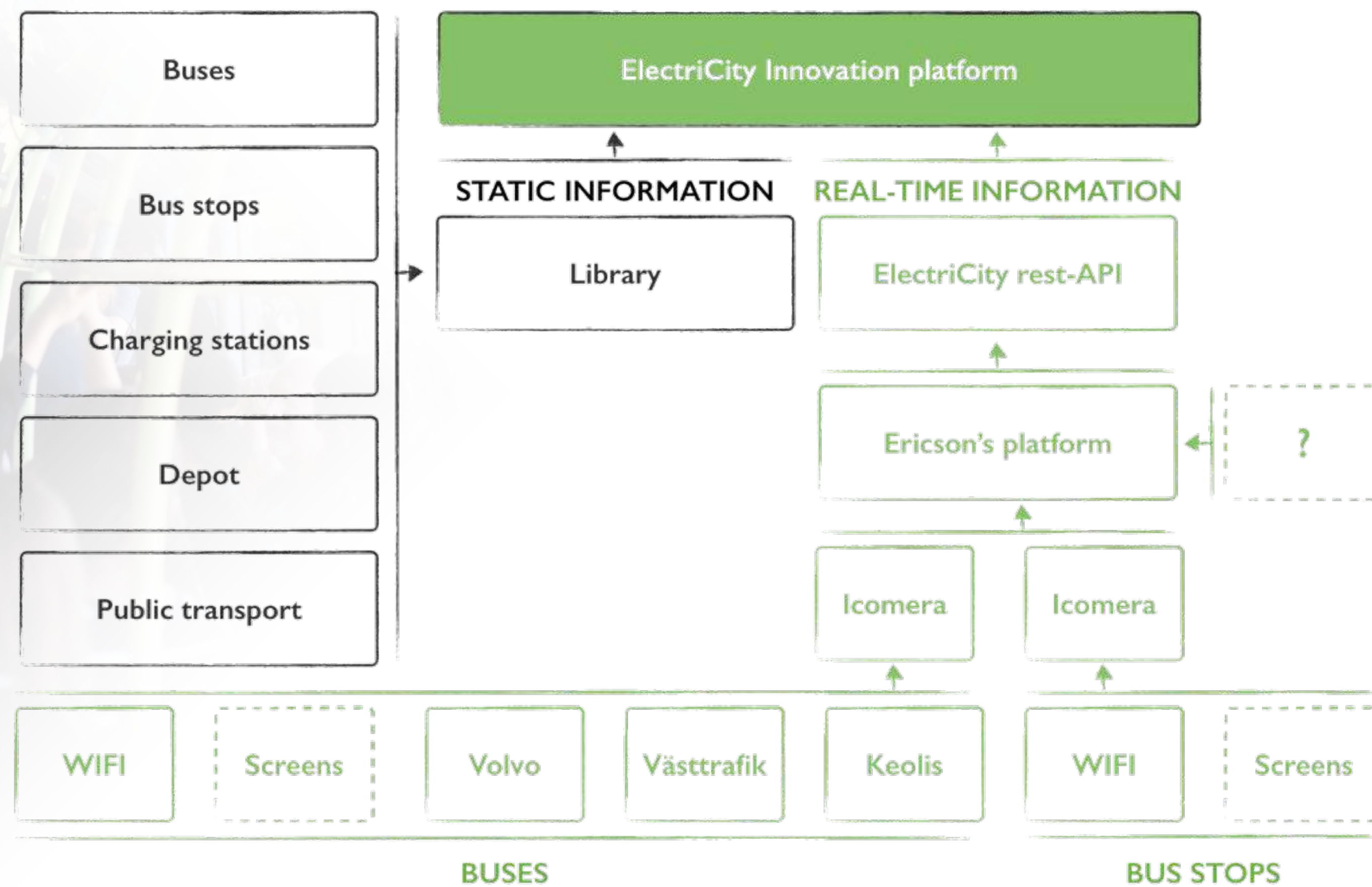
# Content

1. **Green Depot** - New workshop concept & showroom
2. **Teknikgatan** - Indoor bus stop, café & charging
3. **Lindholmsplatsen** - Zone management
4. **Lindholmen Science Park** - Lounge & exhibition
5. **Buses** - 7 PHEV & 3 full electric
6. **Frihamnen** - Urban development project
7. **Götaplatsen** - Novel bus stop design
8. **Sven Hultins Gata** - Silence bus stop & charging
9. **Chalmersplatsen** - Novel bus stop design





# Platform





# EIC2015

- **What**

- A 4 week innovation contest aimed at developing prototypes that enhances the attractiveness of tomorrow's bus trips
- 261 participants & 48 prototypes

- **Why** *(from an industry perspective)*

- Surge public interest and involvement
- Catalyse innovation
- Test the innovation platform





- **What**

- An 8 week international innovation contest aimed at digital services that facilitate and streamline the operation of electrified bus systems

- **Why** *(from an industry perspective)*

- Visualizes the wealth of possibilities by **developing prototypes**
- Creates an opportunity to actually increase the operational efficiency by refining and **demonstrating one or a few digital services** on one of the associated demonstration sites



# DAT255

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- **What**
  - A 7 week industry - university cooperation
- **Why** (*from an industry perspective*)
  - Identify service ideas & potential
  - Get feedback on challenges and datasets
  - Inspire teams to participate in EIC2016





# INTRODUCTION TO CHALLENGES



## **How can novel digital services facilitate operation of electrified bus services?**

1. Inspection & reporting
2. Task prioritization
3. Communication & transparency



# Inspection & reporting

- **Background**

- Error reporting is currently unsatisfactory in terms of frequency, subjectivity and information quality.

- **Relevance**

- Opportunities for fast, accurate and proactive actions would be supported if the quality of information from bus drivers increased, if it could be combined with objective data, and if the information was faster distributed to the right recipient.

- **Potential**

- Relevant to all bus systems worldwide, but is especially important for electrified systems due to the increased complexity.



# Task prioritization

- **Background**

- Novel roles and more data supply new opportunities to optimize the maintenance of the buses.

- **Relevance**

- Operating and maintenance personnel's ability to plan and prioritize actions on both individual and fleet level would be assisted if they had access to better decision in the form of information and recommendations.

- **Potential**

- Growing global relevance as servicification and digitalization is ongoing, international trends.



# Communication & transparency

- **Background**

- The communication and transparency between eg. bus drivers, traffic management and the depot is complex and difficult to grasp.

- **Relevance**

- A better common understanding and overview is fundamental to optimize system component availability and reliability.

- **Potential**

- Relevant to all bus systems globally. However, the stakes for electric buses are greater as they are dependent on the reliability of the charging stations.



# Thank you!

Göran Smith  
**Viktorias Swedish ICT**