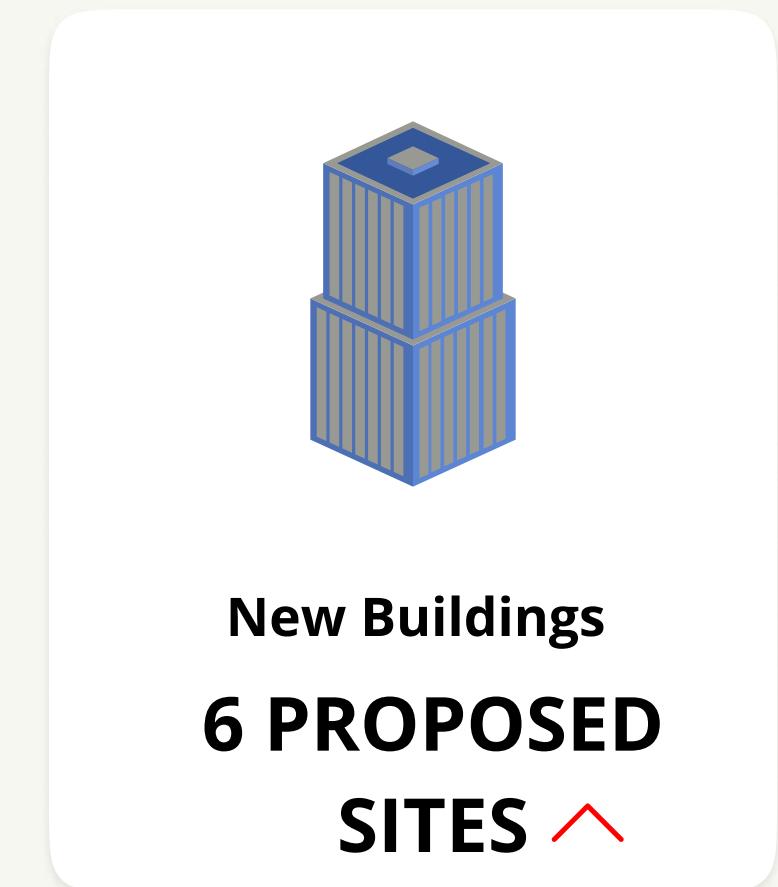
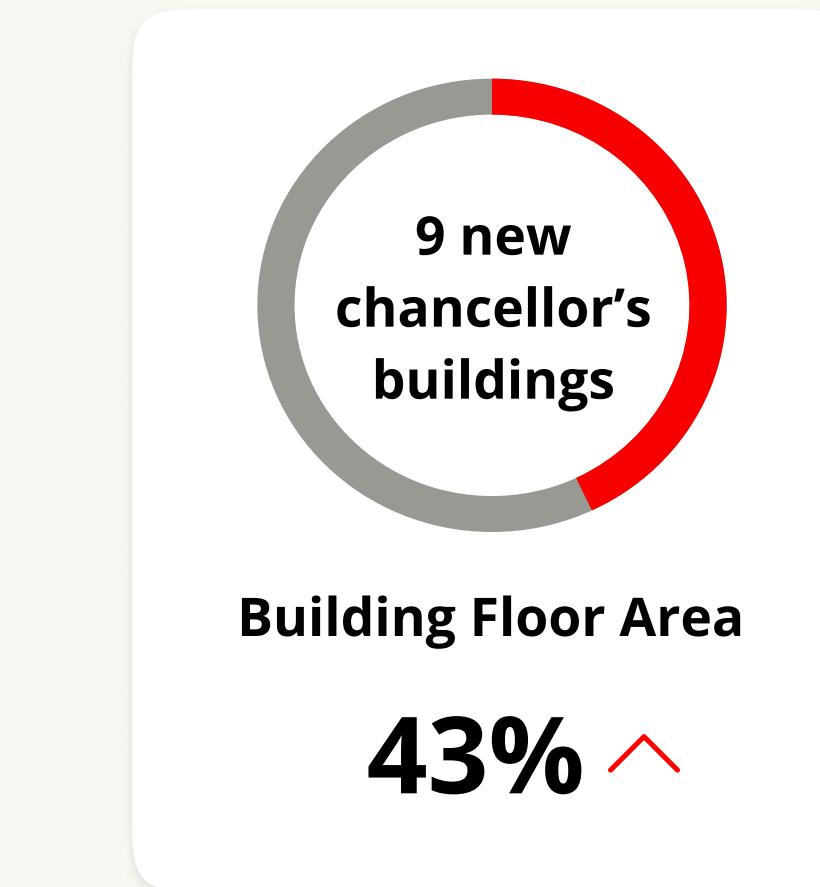
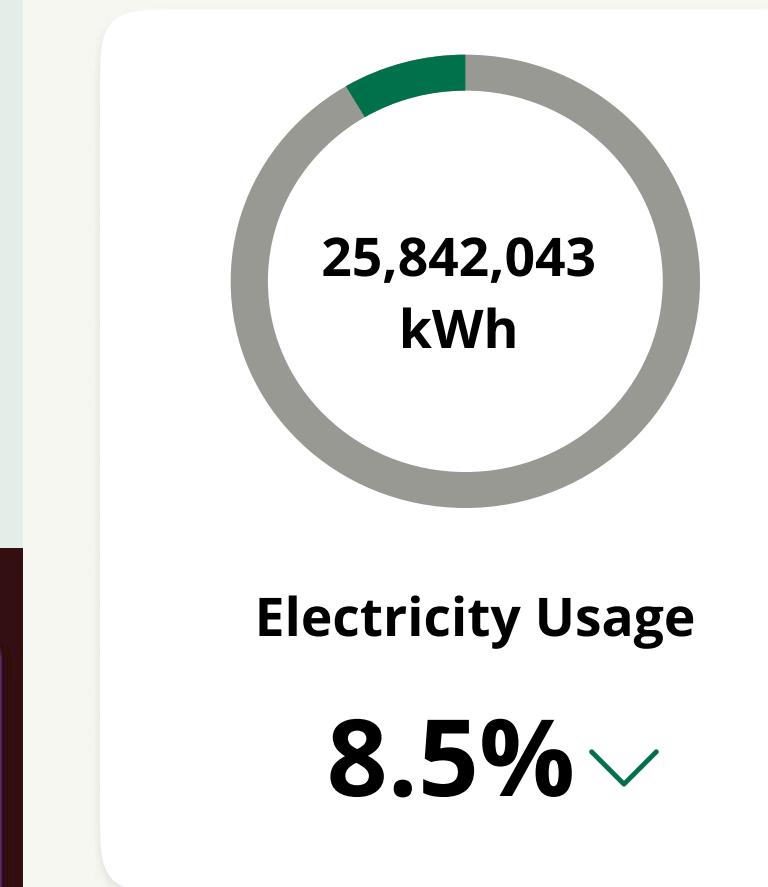
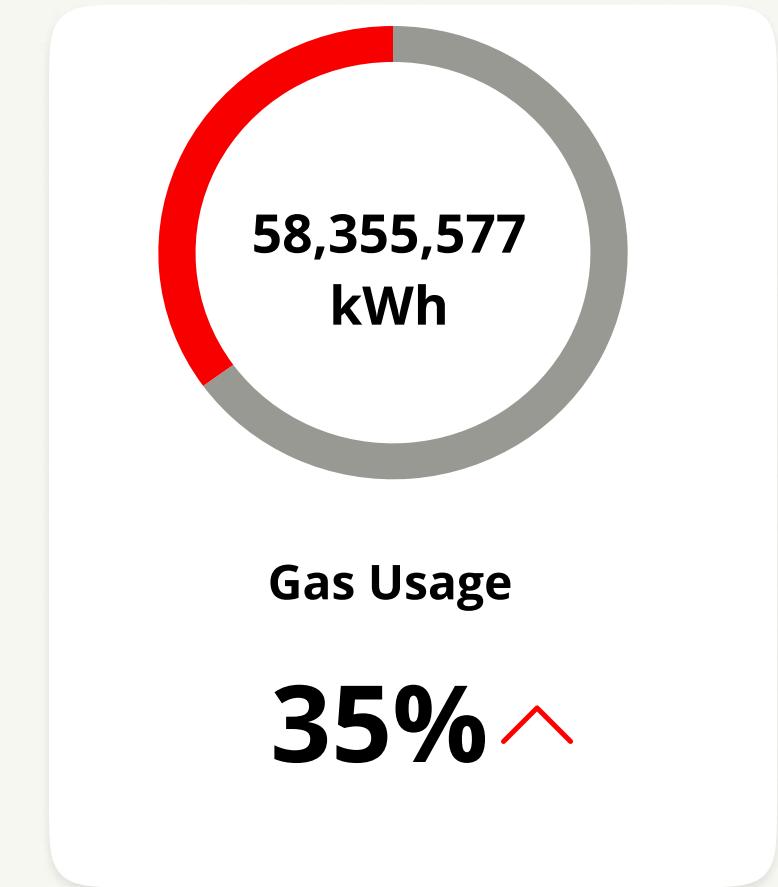
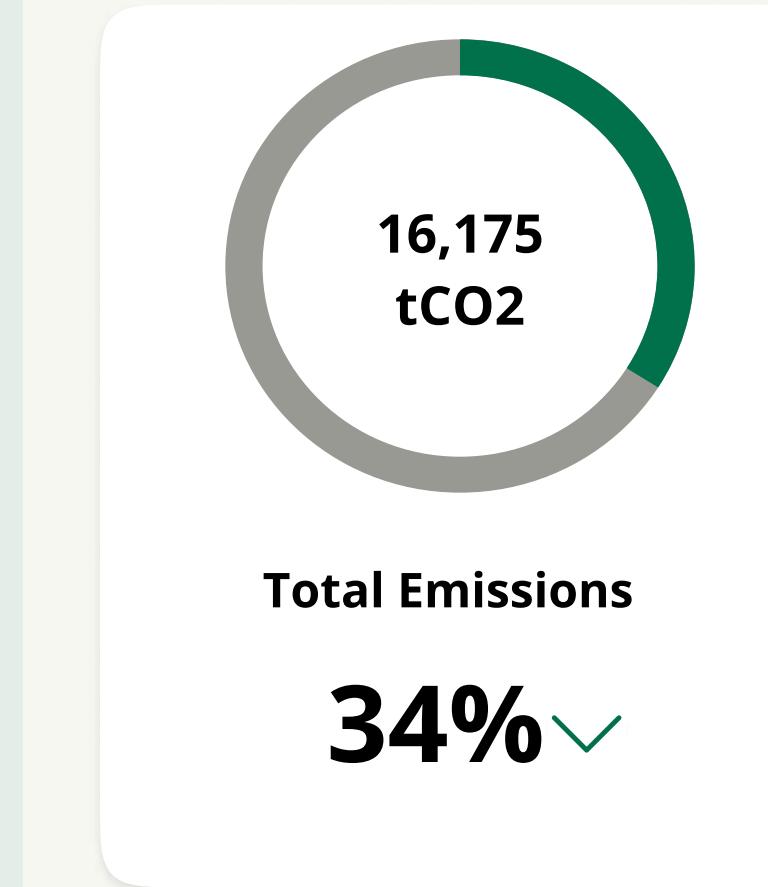


SELF FINANCING SMART BUILDINGS



What are the problems?



What can UoB do?



Build Smarter Buildings & Refurbish Old buildings to make them smarter

Impact at University of Bath

21049405
kWh

Reduction in
Energy Usage
25% ✓

4043
m³

Reduction in Total
Water Usage
25% ✓



Enhance the user
experience, safety



Ensure
Compliance to
The Energy
Performance of
the Building
Directive



Create a living
lab to teach
students about
sustainable
buildings

4043
tCO₂

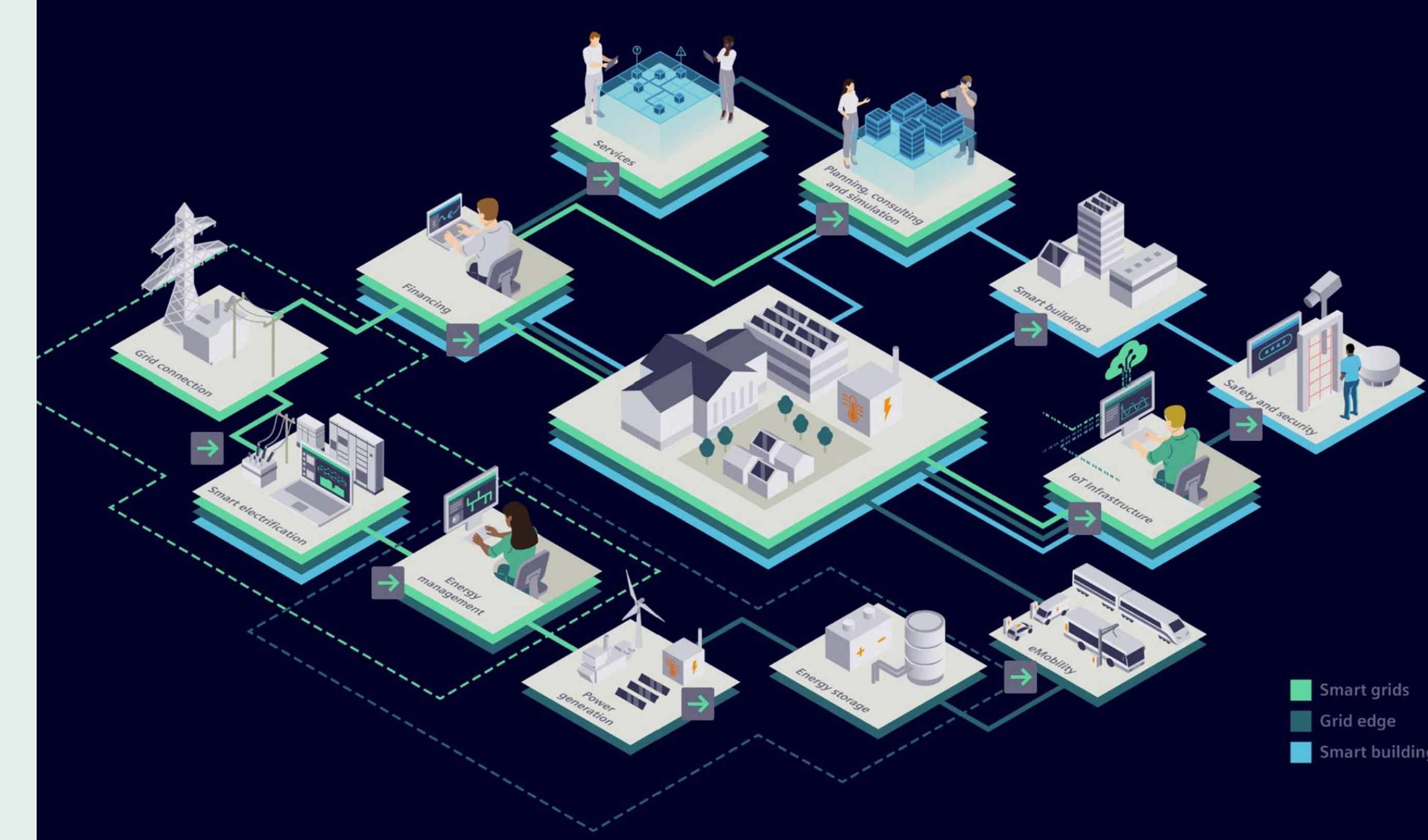
Reduction in
Total Emissions
25% ✓

What are Smart Buildings?



- It uses technology to enable efficient and economical use of resources, while creating a safe and comfortable environment for its occupants
- Well being of occupants can be enhanced with user experience apps, air quality monitoring, smart lights, thermal screening at entry
- Already implemented by University of Birmingham & UCL

Smart Buildings at UoB



Source: Siemens, <https://new.siemens.com/global/en/markets/urban-communities/higher-education.html>

Control Features:

- Power & Lighting**
- H-VAC & Thermal Screening**
- Water & Waste**
- Security & Fire alarm systems**
- Generate power**

Benefits:

- Reduce energy consumption & cost**
- Improve well beings of occupants**

Finacing Methods

How can we self-finance smart buildings?



Smart Building as a Service (SBaaS)



Sustainability Bonds

Financial Incentives



Revenue Generation



Cost Savings

How to start making buildings smart?

- **Digital twins through Building Control Software using in-house resources**
- **Collect feedback to educate users and the system to deliver optimal experiences**
- **Enhance the understanding of the buildings and ability to make informed decisions**



Conclusions



- 25%** Reduction in emissions
- 0** Upfront costs
- 1000+** Graduates & Post Graduates through living labs
- 100%** Chance to Increase Reputation, user experience & safety

Thank
You!
Q & A...

