Campus Development History

- Andersonian Institute founded in 1796.
- Royal College built in 1905 and Island Site developed 1958 to 1964.
- University Status Granted in 1964- First Technological University in UK.
- Currently 30 Academic Buildings and 1700 Bed Spaces.
- Gross Building area of c. 300,000m².
- Estates Development Framework 2010 to 2024, established a £391m 15 year plan to develop the Campus.
- By 2018, £475m had been invested in Campus.
- 2019 to 2024- plans to invest additional £525m.

£ One Billion Campus
John Anderson Campus Plan

Off Campus Sites:

AFRC
PNDC
Stepps
Developments completed to date

2010 to 2018

- Six New Buildings
- Eight Major Refurbishment Projects
- District Heating Project
- DDA Alteration
- Landscaping Improvements
- Five Disposals
- One Acquisition
- Relocations
- Teaching Upgrades

**Total Investment:** £475m

External Funding: 20%
Estate Strategy: Influencing Factors

- SU Strategic Plan - growth of PGT and Widening Access
- Vision 2025
- Outcome Agreement
- Development of the Strategic Themes
- Operational Plans for Faculties + Professional Services
- Demographics - student/staff numbers
- External Factors - SFC Carbon Reduction
- Focus on Student experience and Operational excellence.
- Targets for student recruitment
Strategic Goals

- Support the Student Experience
- Invest in Strategic Priorities
- Increase Space Utilisation
- Adaptable future proof Campus
- Sustainable Campus - fit for purpose
- Improve Building Condition
- Reduce Operational Costs
- Reduce Carbon footprint
- Improve the Campus Visual appearance
Completed Capital Projects - 2010 to 2013

SIBPS

James Weir Building

HASS - Lord Hope Building

PNDC

AFRC 1 and 2

HASS - Curran Building
Completed Capital Projects-2014 to 2015

Strathclyde Business School

John Anderson Building

Technology and Innovation Centre
Completed Capital Projects-2016 to 2018

INOVO Purchase

Royal College Teaching Rooms

IS Consolidation, Curran Building
CHP District Energy Project

• £19.7m Investment
• 2 kilometres of pipework
• 1 x 3.3 MW engine
• 16 Buildings connected.
• Savings of £2m a year
• Carbon Reduction of 4,200 tonnes
• Community Benefits- 230 person years of employment.
• 71% local Spend
• £12m GVA to Scottish Economy
CHP District Energy Project

**UNIVERSITY OF STRATHCLYDE: PROJECT MILESTONES**

- **Jun 2017**: First DH pipes arrived on-site
- **Nov 2017**: 3 x 8MW Boilers arrived on-site
- **Dec 2017**: Thermal store installed
- **Jan 2018**: Stratchclyde commitment Tree Planting event
- **Apr 2018**: 3.3MW CHP engine delivered
- **Jun 2018**: Flue installation above energy centre
- **Sep 2018**: Energy Centre completed
- **Jan 2019**: CHP engine switched on
Strathclyde Sport

- £31m Investment.
- 102% increase in Membership
- 86% Increase in Utilisation
- Average no. of Users per hour: 316
- Partnership with Strathclyde Sirens & Glasgow Warriors
Four Projects on Site

Planned:
• Three Major New Buildings
• Three Major Refurbishments
• Campus Realm
• Heart of Campus Project
• Phase Two of CHP Project
• Four Masterplan Projects
• Four Options Appraisals
• Phase II of Sport Strategy
• Two Acquisitions
• Residences Masterplan

Total: £525m

External Funding: 53%
Capital Projects - on site 2019 to 2020

Confucius Ramshorn (£2.4m)

Wolfson Biomedical Building (£15.5m)

AFRC 3: HIVES Forge Press Extension (£16m)
Learning and Teaching – on Site 2018 to 2020

Co-location of Learning & Teaching /USSA/Student Facing Services

Redevelopment of Colville and Former Architecture Buildings.

£60m Investment
National Manufacturing Institute for Scotland (NMIS)
Based in Renfrew- a £1Bn Innovation District creating 10,000 high value manufacturing jobs providing co-location of research, skills development, services and high value manufacturing industry. World leading manufacturing research and training facility supporting the Scottish advanced engineering and materials sector. Investment: £87m

Four elements:
• Skills Academy
• Digital Factory of the Future
• Collabatorium
• Forum/Street

Status:
• Court approval: Oct 18
• Feasibility Study Completed.
• Stage II report in final draft
• On Site: end 2019
National Manufacturing Institute for Scotland (NMIS)

NMIS will be the driving force behind the rapid expansion of advanced manufacturing businesses and a focal point for manufacturers across Scotland, helping create new companies, new jobs, a skilled workforce, new products, increased R&D, increased inward investment, and increased GVA.
Glasgow City Innovation District – TIC ZONE

£150 million Investment in Innovation and collaboration

**Six Clusters:**

- Industrial Informatics
- Financial Technology
- HealthTech
- Quantum Technology
- Space
- 5G

**Four buildings:**

**TIC**  (c. 25,900m² GIFA)

**Inovo**  (c. 10,000m²)

**TIC West**  (c. 10,000m²): office and specialist lab space.

**TIC East**  (c. 20,000m²): office and business innovation, conference & exhibition
TIC Zone- Feasibility Proposals

- Feasibility Stage

TIC West

TIC East
Campus Realm

High Level Signage

Totems

Heart of the Campus
Building Masterplans/Appraisals

1. Thomas Graham
2. Royal College.
3. Podium Site.
4. Curran/Library.
5. Graham Hills.
6. University Centre.
7. USSA.
9. St Pauls
Lessons Learnt

- Be an Informed Client.
- Understand the Users requirements- consult well.
- Allow sufficient time to develop design, and to deliver the project on site.
- Soft Landings – engage with clients and contractor early.
- Design for OPEX not for CAPEX – Understand what it means to operate and maintain the building.
- Don’t rely on technology to solve all your problems – understand the human element and implement the right level of technology.
- Use specialist input where required- don’t try to find all the answers yourself.
- Quality control is key.
- Use technology to enable users to control their environment and use data to make adjustments for a happier client.
- Consider Energy Efficiency, Improved performance and Environmental benefits at the outset.
- Develop Operational strategy well in advance of completion.
Innovation Opportunities

- Add value with Innovative design.
- Encourage collaborative working between members of the Project Team.
- Relevant state of the art technology to plan design and operations- BIM etc.
- Design and construct Intelligent Buildings – Controls, information management.
- Integration of design – compatible interfaces, co-ordination, buildability.
- Reliability – tried and tested.
- Consider Prefabrication and preassembly for reduced Installation costs and time.
- Good Procurement Practice.
- Experienced Contractor and Subcontractors.
- Supply Chain Management.
- Use technology to monitor and control quality – record the construction process.
Thank You
Our title is “Evolving Building Technology” and the theme concerns the application of innovation and creativity to improve how we design and construct buildings and their surrounding infrastructure. What we are looking for is someone who can speak from a client perspective. A general talk about campus development plans (as we had this year from Ann Allen from Glasgow University) would be fine, with an emphasis on what innovations our industry should consider in order to better deliver their goods and services to meet your objectives.

The audience will be primarily building services engineers, but we also expect participation from architects, constructors, facilities managers, and covering education, health care and commercial building sectors.