Designing and building spaces for effective learning

Proposed building complex for

The Faculty of Computing and Technology

University of Kelaniya

The purpose of a university is to bring together diverse people and their ideas in an environment that creates potential for intellectual and social exchange.

"New buildings should express the aesthetic ideas of our times, so that as we look back on them they also become a cultural record of ideas about architecture and campus life".

21st century learning space design – Key considerations

The design of individual spaces needs to be:
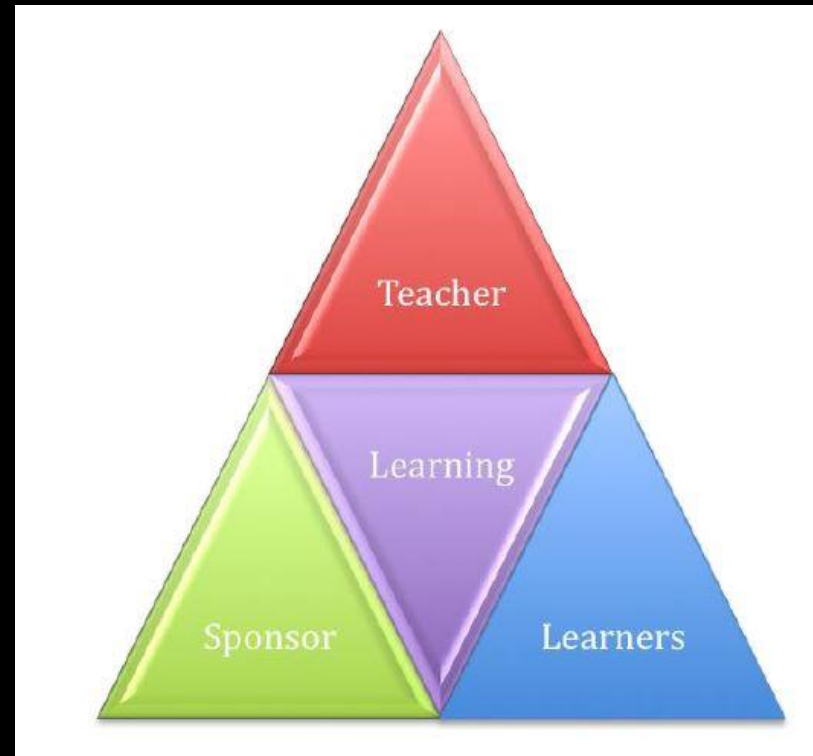
- Flexible – to accommodate both current and evolving pedagogies

- Future-proofed – to enable space to be re-allocated and reconfigured

- Bold – to look beyond tried and tested technologies and pedagogies

- Creative – to energize and inspire learners and tutors

- Supportive – to develop the potential of all learners

- Enterprising – to make each space capable of supporting different purposes

Designing Spaces for Effective Learning: A guide to 21st century learning space design, jisc.ac.uk

"Leaning Centred Instruction" paradigm at the Faculty of Computing and Technology (FCT)

We promote Deep Learning.

Through Active Learning practices.

Supported by Collaborative Learning.

FCT today

3	**3**	**580**	**30**	**310**
Departments	Degree programmes	Students	Academic staff	Non-academic staff

40,000 sq. ft.

Rented premises at Peliyagoda

FCT projections for 2026

8
Departments

8
Degree programmes

1850
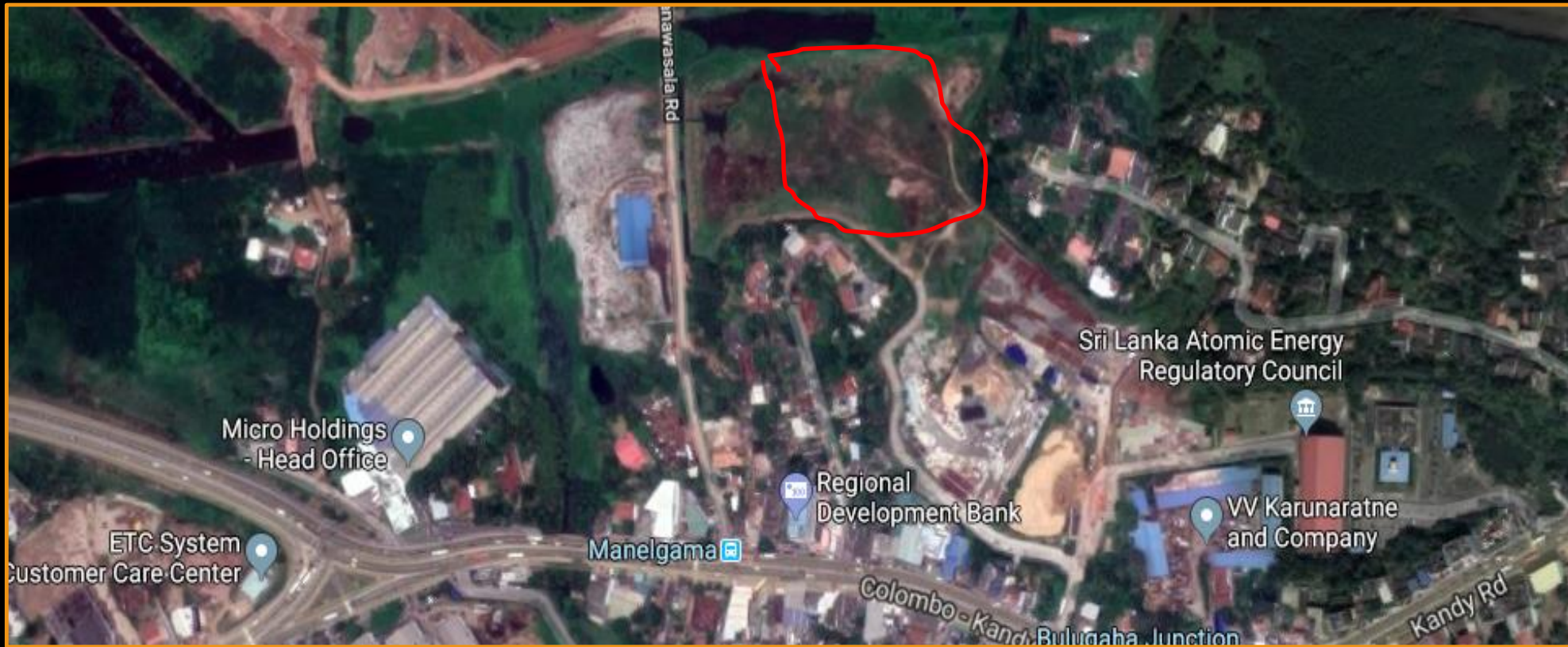Students

175
Academic staff

35
Non-academic staff

300,000 sq. ft.
Proposed premises at Wedamulla, Kelaniya

Proposed location

Land extent: 1.54223 Ha (3 A - 3 R – 09.75 P)

Proposed building complex

A1 – Administrative Building

A2 – Academic Building

A3 – Staff facilities

B – Laboratories and Industry Collaboration Centres

C – Student Centre

D – Auditorium and Car Park

E – Staff Accommodation

Laboratories and industry collaboration centres

- Engineering labs
- Bio labs
- Engineering workshop
- Makerspace (ideaSpace)

- Nanotechnology Centre
- eLearning Centre
- Centre for Data Science
- Cyber Security and Computer Forensics Centre
- Centre for Higher Education Teaching, Learning and Research
- Industry Interaction Cell
- Business Incubator

Lecture rooms and computer labs

- Tiered lecture rooms – with provision for collaborative learning
- Harvard Style lecture rooms
- SCALE-UP classrooms
- Seminar rooms

- General computer labs
- Games and animation lab
- Network and security lab
- Virtual reality lab
- Embedded systems lab
- etc.

Type of facilities we envision

Tiered lecture rooms that facilitate group learning

Type of facilities we envision

Harvard style lecture
rooms

Type of facilities we envision

SCALE-UP classrooms

Technology Enabled Active Learning (TEAL)
Massachusetts Institute of Technology

Mark Bessette - CECI - MIT

Type of facilities we envision

'Science on Display'

Type of facilities we envision

Learning Commons

Type of facilities we envision

Spaces for group work

Type of facilities we envision

Open and collaborative environment

Type of facilities we envision

Buildings themselves as labs/demonstration areas

Our overall goal

- Energy efficient building complex
  - Near-Zero Energy Buildings, if possible.
  - USD 500,000 available for installing renewable energy generation facilities

- UDA – Gold Certificate
- GBCSL – Gold Certificate

Where we got the inspiration from: NZEB @ NSU, Singapore

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Expected final outcome

- A building complex that would be synonymous with FCT.
- Not another set of typical buildings.

Thank you.