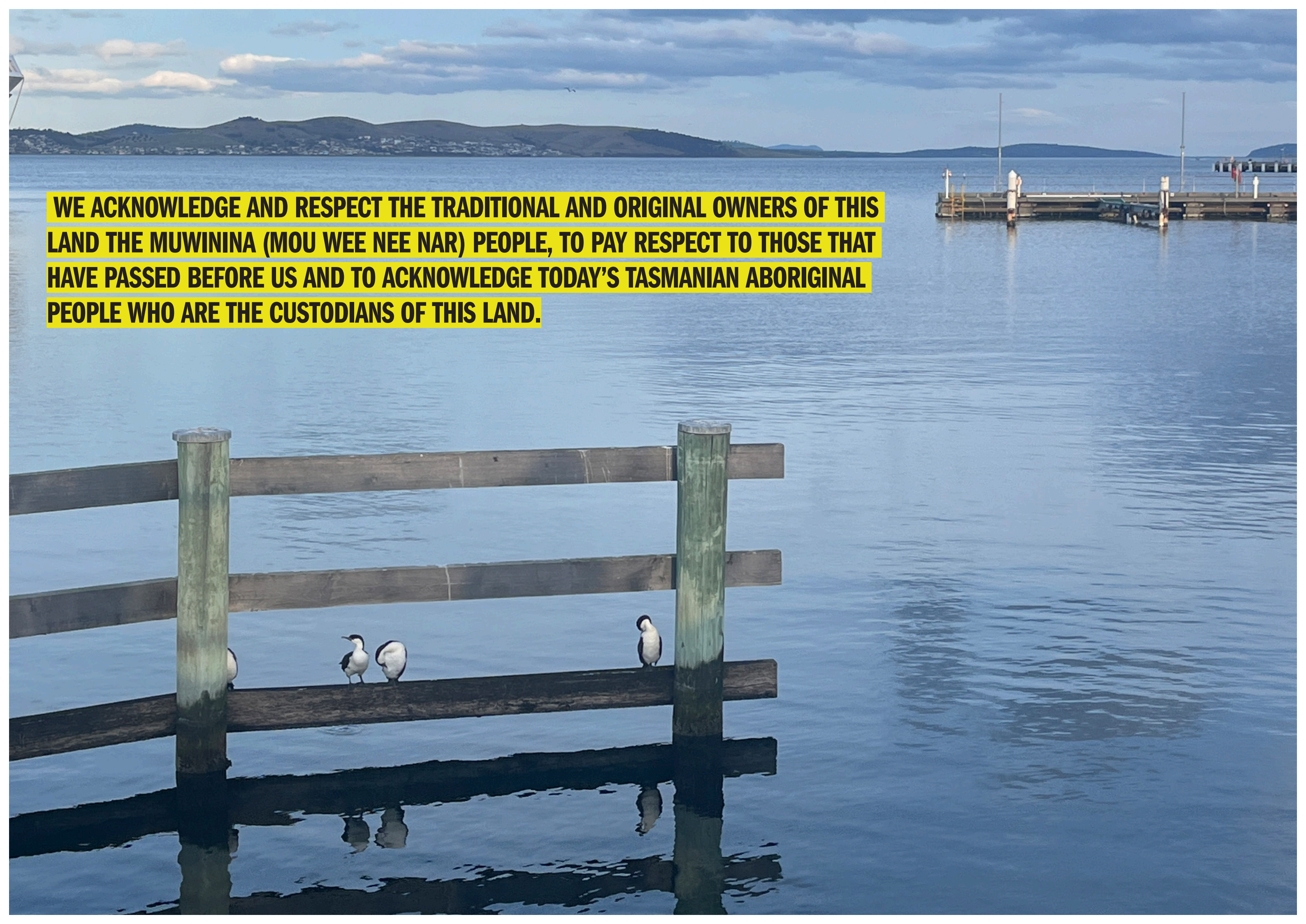




UTAS STEM WORKSHOP OUTCOMES REPORT



WE ACKNOWLEDGE AND RESPECT THE TRADITIONAL AND ORIGINAL OWNERS OF THIS LAND THE MUWININA (MOU WEE NEE NAR) PEOPLE, TO PAY RESPECT TO THOSE THAT HAVE PASSED BEFORE US AND TO ACKNOWLEDGE TODAY'S TASMANIAN ABORIGINAL PEOPLE WHO ARE THE CUSTODIANS OF THIS LAND.



Outline

1. Overview + Agenda
2. Define + Context Presentations
3. Discover + Provocative Propositions Outcomes
4. Dream + Imagining Place Outcomes
5. Design Part 1 + 2 - Developing Parts & Whole Outcomes
6. Deliver + AI Action Planning Outcomes

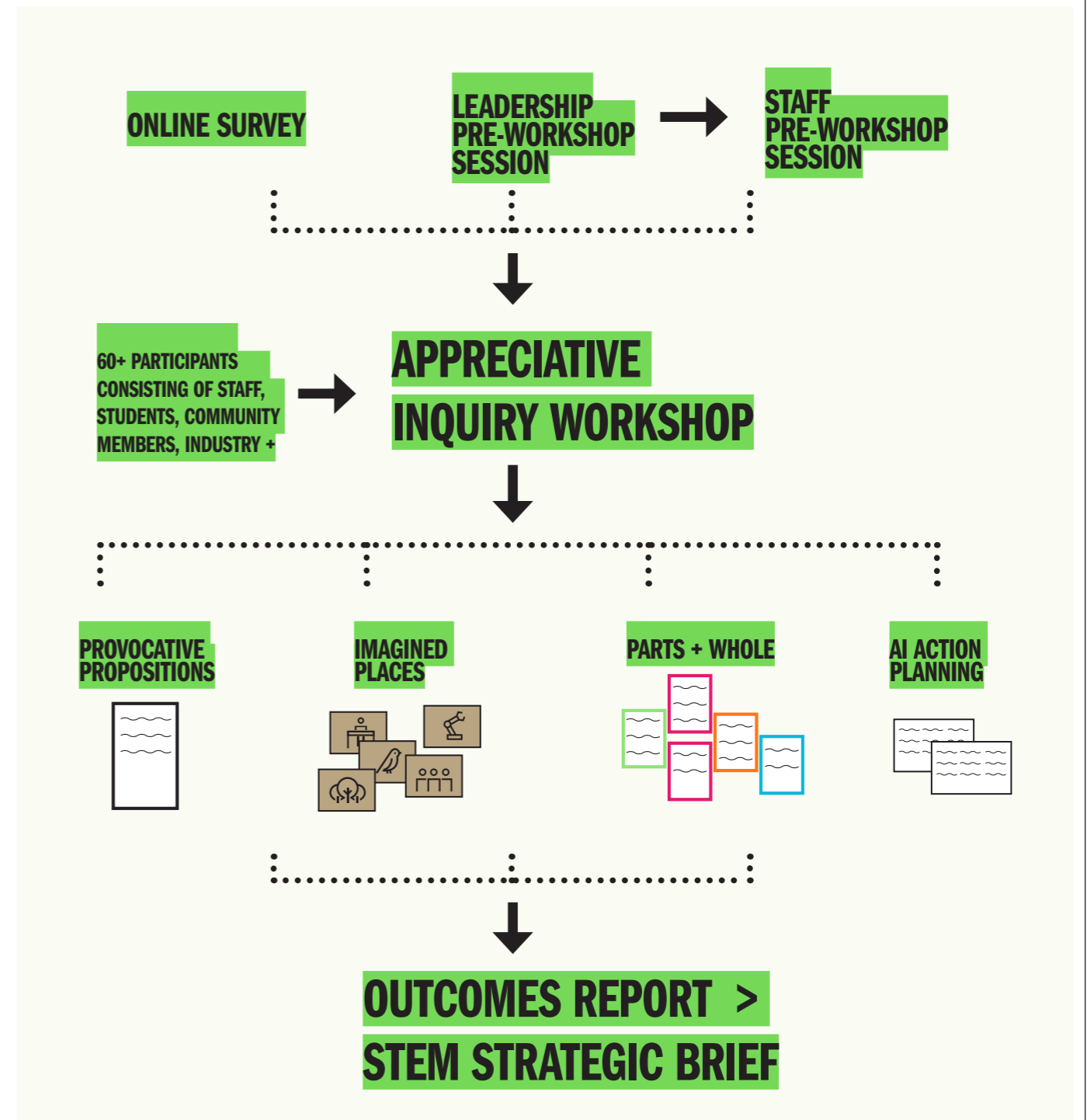
01 Appreciative Inquiry Workshop Overview

The Appreciative Inquiry Workshop brought together a diverse group of stakeholders to collaboratively address key challenges and shape the future of STEM in southern Tasmania. The goal was to identify core priorities and define what this project should achieve for both STEM and UTAS in the region.

The atmosphere was one of optimism and problem-solving, as participants eagerly contributed to discussions focused on envisioning the best possible outcomes. Each

individual brought a unique perspective, advocating for their own priorities and helping the Hassell team gain a well-rounded understanding of what matters most.

The activities were carefully designed to encourage problem-solving through diverse prompts and ideas, promoting collaboration and engagement with concepts both visually and physically.



01 Agenda

00 Welcome + Introduction	9 am	15 min
Acknowledgement of Country Rufus Black		
01 Define + Context	9.15am	1 hr
1 Strategic Refresh/2050 View Rufus Black Presentation 10 min		
2 Feedback from pre-Ai Workshop + Survey data Angela Castles Presentation 10 min		
3 UTAS Student Experience TUSA Student President - Liam McClaren 10 min		
4 STEM Places Mark Roehrs Presentation 15 min		
5 Present + Agree the Affirmative Topic (Systems Thinking) John Holm Presentation 10 min		
02 Discover	10.15am	45 min
1 Discover the Best of STEM 15 min <i>The purpose of this section is to collectively discover the best of what is through grounded reflection and appreciation of the past and present. Think of a time when STEM in Southern Tasmania was at it best. In pairs, explain to your partner what it is about that time that represents for you a "peak experience".</i>		
2 Provocative Propositions 30min <i>Provocative Propositions take 'the best of our past and present' and start generating ideas about our future 'might be'. They should be written in positive terms, as if they have already happened, and they should provoke action. As a table, create memorable statements (no more than 3) that captures what you think STEM might be in Southern Tasmania.</i> <i>Write these up as a poster that we will pin up.</i>		
B1 Morning Tea	11am	15 min
03 Dream + Imagining Place	11.15am	1hr 15 min
1 Feedback from the Boards or Matt/John H 15min		
2 Visualise the Future Dream Imagining the Place 30 min <i>The purpose of this section is to start to make real the possibilities we discovered before morning tea. Close your eyes and sit silently for a minute or two. Imagine you have been away from Tasmania for some time, perhaps 10 or 15 years. Visualise what STEM in Southern Tasmania now looks like, what things were hoping for have come true, what was needed to make that happen?</i> <i>Individually choose those image cards that represent for you the important elements of what you've imagined.</i>		
3 Imagining the Place 30 min <i>Each table is now going to co-create a collage of what that future looks like based on the image cards you selected.</i> <i>Share the importance of your selected cards and start to put things together that should be together so that we can start to visualize the Future Dream.</i> <i>Blutack these cards to the big sheets of paper provided.</i>		

B2 Lunch	12.30pm	45 min
04 Design Part 1	1.15pm	1hr 15 min
1 Feedback from the Posters/Statements Matt W+ John H 15 min		
2 Developing Parts 1 hr <i>This session focuses on developing a nuanced understanding of what is needed to realise the Best of STEM and the Place we've Imagined. The focus here is to create a 'kit of parts' that will help us make that Place.</i> <i>On the tables are cards of different space types. The idea is as a table select the range of spaces that you envisage making up the Place you created in your collage. Each card is 'blank' in that you need to write in the name of the space, what it does or activities it supports, any special requirements and finally, who will use that space (noting there can be more than one user or occupant).</i>		
B3 Afternoon Tea	2.30pm	15 min
05 Design Part 2	2.45pm	1hr 15 min
1 Establishing the system 30 min <i>This session focuses on how the 'parts' we've just identified need to come together to make a whole system that supports the Future of STEM vision.</i> <i>The idea here is to take those cards and to create a system of spaces and connections. Blutack the cards to the big sheet of paper provided.</i>		
06 Deliver + Ai Action Planning	4pm	45 min
1 Planning the Way Ahead 45 min <i>This session focuses creating an action plan (within a systems thinking approach) for the way ahead. Systems thinking focuses on the connections (what we established in the previous session) and we now want to capture that thinking.</i> <i>On the table are copies of an Ai Action Plan table that identifies Outcomes (the Future of STEM vision) and links them to Facilities, Partners, Design and Site Requirements, and Complementary Elements.</i> <i>Working first as an individual and then as the table, complete the matrix.</i>		
07 Next Steps	4.45pm	15 min





02 Define + Context Presentations

"STEM has a remarkable record of globally significant contributions. Today we will imagine a **bold and aspirational STEM vision in Southern Tasmania**, that reflects our remarkable distinctive local character, and **identify the world-class facilities** that will enable us to achieve this future. This future will only be realised through the **collective imagination and commitment of staff, students, community, government, and industry.**"

Appreciative Inquiry Workshop Affirmative Topic

The day began with a series of concise, impactful presentations from the UTAS and Hassell teams, introducing a range of forward-thinking, big-picture concepts. These presentations set an optimistic, ambitious, and future-focused tone that resonated throughout the day, inspiring participants to imagine possibilities rather than focus on the present.

Rufus Black opened the session by exploring the transformative potential of STEM in Tasmania and its capacity to drive significant long-term impacts on the economy, climate, and global research.

Angela Castles followed, sharing insights from earlier surveys that showed how UTAS and COSE are building on past contributions to shape a robust strategy that reflects the aspirations of their team.

Liam McClaren, president of Tasmanian University Student Association, spoke on the student experience at UTAS in Hobart, with a specific focus on students within STEM. There is a great participation in clubs, however it seems

that students are not fully satisfied with the current campus experience.

Mark Roehrs delivered an insightful presentation on the STEM buildings Hassell has developed across Australia, offering the audience a glimpse into the infrastructure and facilities being created at other mainland universities. His presentation provided a vision of what UTAS could achieve with this upgrade. The diverse range of projects, from adaptive reuse to large specific research facilities, illustrated that there is no one-size-fits-all approach. Instead, by thoroughly analysing the opportunities and constraints of each campus, as well as the unique technical and pedagogical needs of each facility, tailored solutions are created.

John Holm concluded the Define session by introducing the "Affirmative Topic." This optimistic approach, where participants express their vision for the best possible outcome as if it were already a reality, helps shift their mindset from focusing on current limitations to imagining what could be achieved.

Strategic Refresh

Rufus Black



Pre-Ai Workshop + Survey Overview - Angela Castles



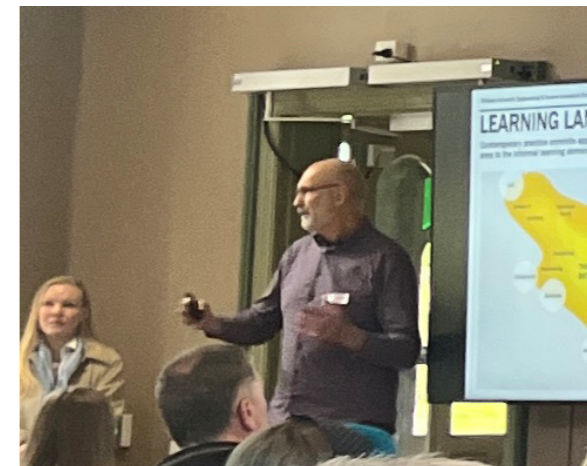
UTAS Student Experience

TUSA President - Liam McClaren



STEM Places

Mark Roehrs



Affirmative Topic

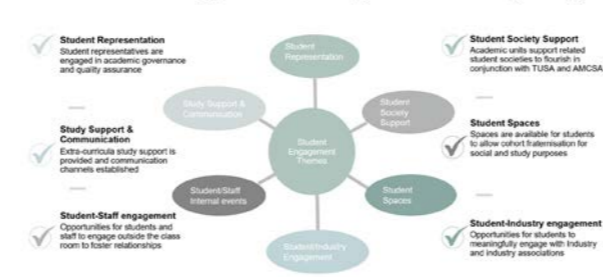
John Holm



Through workshops with staff and HDRs, we started by exploring the values that were important to people and their work through teaching, research and engagement

	Teaching	Research	Engagement
Values	Working alongside	Working toward	Working with
	<ul style="list-style-type: none"> Industry and government partners (big and small, farmers/corporates/start ups/spin offs) colleagues (disciplinary and interdisciplinary, removing silos) students (research led teaching, hands on + field based, anywhere) community (co-creating a shared vision for the future) 	<ul style="list-style-type: none"> a future focused shared vision + tangible goals purposeful + positive impactful outcomes for the community/world inspiring future generations to engage with big (wicked) problems 	<ul style="list-style-type: none"> nature/natural environments (one of Tasmania's unique features) world-class integrated research + teaching facilities creativity, curiosity, imagination, inspiration, intellect

Six themes of Student Engagement in the College of Science and Engineering



This graphic was taken from a presentation to the Student Experience Committee in late 2023 following a range of student forums and workshops with ground level staff.

SUSTAINABLE STEM

A net zero energy building with a holistic approach to sustainable building systems including a focus on bio-phillic and wellness through materiality, structural forms and planting. An operable façade system controls light and air inflow with the atrium as the buildings lungs exhausting air via the thermal chimney. A closed mode filters air through the green-wall with air distributed through an in-floor displacement air system.



Context + Affirmative Topic

1. Affirmative Topic
STEM has a remarkable record of globally significant contributions. Today we will imagine a bold and aspirational STEM vision in Southern Tasmania, that reflects our remarkable distinctive local character, and identify the world-class facilities that will enable us to achieve this future. This future will only be realised through the collective imagination and commitment of staff, students, community, government, and industry.



03 Discover + Provocative Propositions

The Provocative Propositions exercise aimed to inspire participants to collectively envision and describe the ideal future of STEM in southern Tasmania. To begin, they shared their experiences in pairs, fostering a comfortable atmosphere. Following this, they engaged in the main activity, crafting up to three impactful statements that encapsulated their ideas for the

future. These statements were written in positive terms, as if the envisioned future had already been realized, with the goal of provoking action.

Key Themes extracted from the Discover Exercise:

<p>Place based : for Tasmania, from Tasmania.</p>	<p>Working collaboratively with government, industry and community to future-proof Tasmania.</p>	<p>The campus and facilities to be a place of connection and belonging.</p>
<p>Interdisciplinary collaboration is the key to success.</p>	<p>Hands on learning / experiential learning.</p>	<p>STEM - you have got to be doing it! STEM is solving real world problems.</p>



Provocation Propositions:

We focus on people first to build a vibrant STEM community on **a foundation of good teaching, research and inspiring students.**

We have **opportunities and spaces for interdisciplinary collaboration, quiet focus and disciplinary connection.**

STEM should embrace STEAM (multidisciplinary collaboration)

STEM as a mechanism for **future proofing optimism.**

Visionary engagement with government and industry for Tasmania's future.

Amplify appreciation of Tasmania's location on the planet to leverage + expand STEM, especially within the geographic south.

Create connectivity between STEM and other disciplines. Create a sense of belonging through shared spaces.

Spaces for students to interact + connect, inside + outside, labs + classrooms.

World class campus that brings industry & academics together to make visible pathways & opportunities.

Communication: accessible, clear, relevant, direct engagement, appeals and links community,

We offer a curriculum with progressive, embedded experiential learning. Eg: up front field exposure in degrees including work integrated learning and professional experience placement + industry activities.

We provide facilities create an enjoyable experience and build s strong sense of connection.

We **welcome + interact with school students** to our facilities and inspire and attract future STEMMERS.

STEM in Tasmania is **globally significant and grounded in place.**

Student experience to be at the centre of purpose.

Understanding the true demographic challenges of both STEM students and workforce.

Creating a more culturally welcoming environment.

UTAS' approach to **STEM is so aspirational it continues to change Tasmania + the world.**

UTAS' **campus and building to reflect the STEM teaching philosophy.**

Because of UTAS STEM's approach, it has secured its financial future.

When STEM is at its best, all levels of **government, community and university work together** - at our scale, we can't do it alone, we have to work as an intentional, integration and sustainable system.

Our partners are co-located with us in a purposeful, meaningful and flexible/ adaptable way to ensure the work we do meets the needs of our beneficiaries, including connections and pathways with our schools and industry in an end to end system.

Our **spaces inspire and reflect the activities that happen in them and are a model for sustainability,** while we also remain aware of global turbulence and our need to contribute to securing a peaceful and democratic future.

Engaging STEM in person - incentives for people to make effort to engage/interact rather than be isolated online. Hands on + bring people back to campus to collaborate, socialise, etc.

STEM - **you have got to be doing it! Connection + community** - activating your community, inspiring + approachable exports, roving scientists in the community, giving back to the community. STEM buildings that are **inspirational.**

Innovation spaces/makers spaces.

Taking ideas through to commercial reality.

Access to inspirational experiences + access to "secrets": teachers/ researchers visiting labs, sites, industries.

04 Dream + Imagining Place

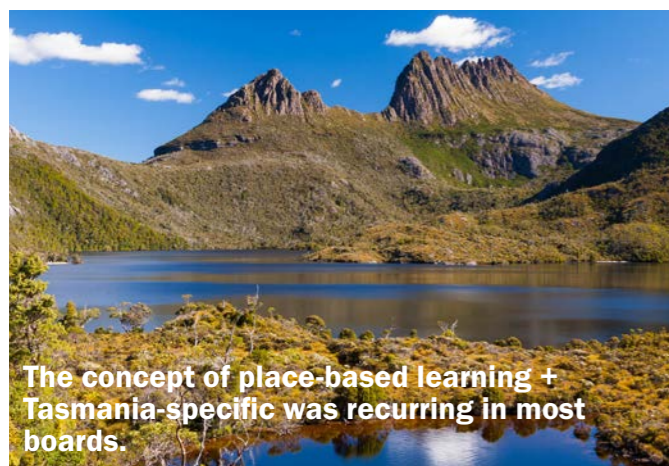
For this exercise, the groups were reorganized to ensure a diverse mix of perspectives, with UTAS staff, students, and community members evenly distributed across all tables. The activity encouraged participants to select a series of images that resonated with them. They would then categorize the images around four key themes: collaboration, campus experience, learning, and research. Each group wrote the key theme and often an additional phrase of idea to compliment the theme on the back of the image and arranged them on a large sheet of paper.

While each group brought its own distinct perspectives and values, certain priorities emerged consistently across all discussions.

Interestingly, many groups expanded beyond the four provided categories, introducing additional themes of their own. Participants also recognized the importance of the overlap between these themes, emphasizing that this integration is essential for creating world-class, future-proof facilities.



This image was selected by all eight groups to feature in their "imagined places" board.



The concept of place-based learning + Tasmania-specific was recurring in most boards.



Key Themes extracted from the Dream + Imagining Place Exercise:



PLACE SPECIFIC + TASMANIA SPECIFIC

"The whole of Tasmania is our campus."



FIELD RESEARCH + LEARNING

Promote the existing culture of studying the island's unique environment and the network of world-class infrastructure.



LEARNING BY DOING

A focus on hands-on learning modalities. Learning spaces to be future-focused, equipped with innovative, cutting-edge technologies.



COLLABORATION

Diverse spaces that facilitate various types of collaboration—across disciplines, between students, staff, industry, and government.



INDUSTRY IN THE ROOM

Foster strong connections with industry partners at all levels of the university: students, research and outreach.



INDIGENOUS KNOWLEDGE

Learn from and incorporate Indigenous experiences and knowledge to enrich educational and cultural understanding.



GREENING THE CAMPUS

Integrate nature into the learning and working environment, leveraging the benefits of natural surroundings for a more enriching and healthy experience.



LEARNING ON DISPLAY

Highlight research and showcase talent to students, staff, and across disciplines, making learning and achievements visible and accessible.



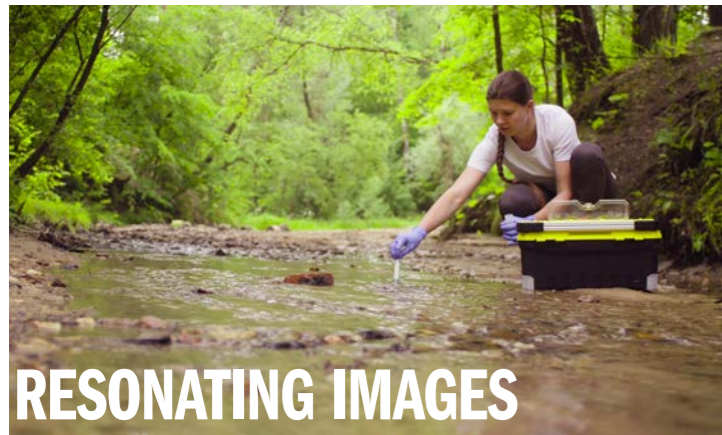
PUBLIC AND YOUTH ENGAGEMENT

Cultivate the pipeline of future STEM students in Tasmania by actively engaging with the public and inspiring children through educational outreach.

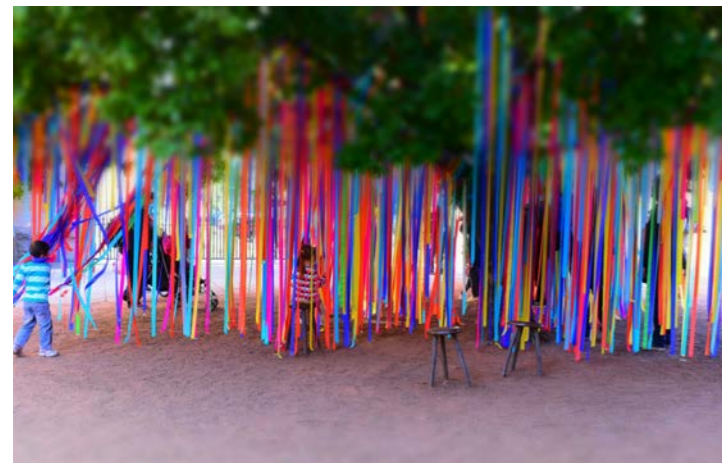


ACCESSIBILITY AND DIVERSITY

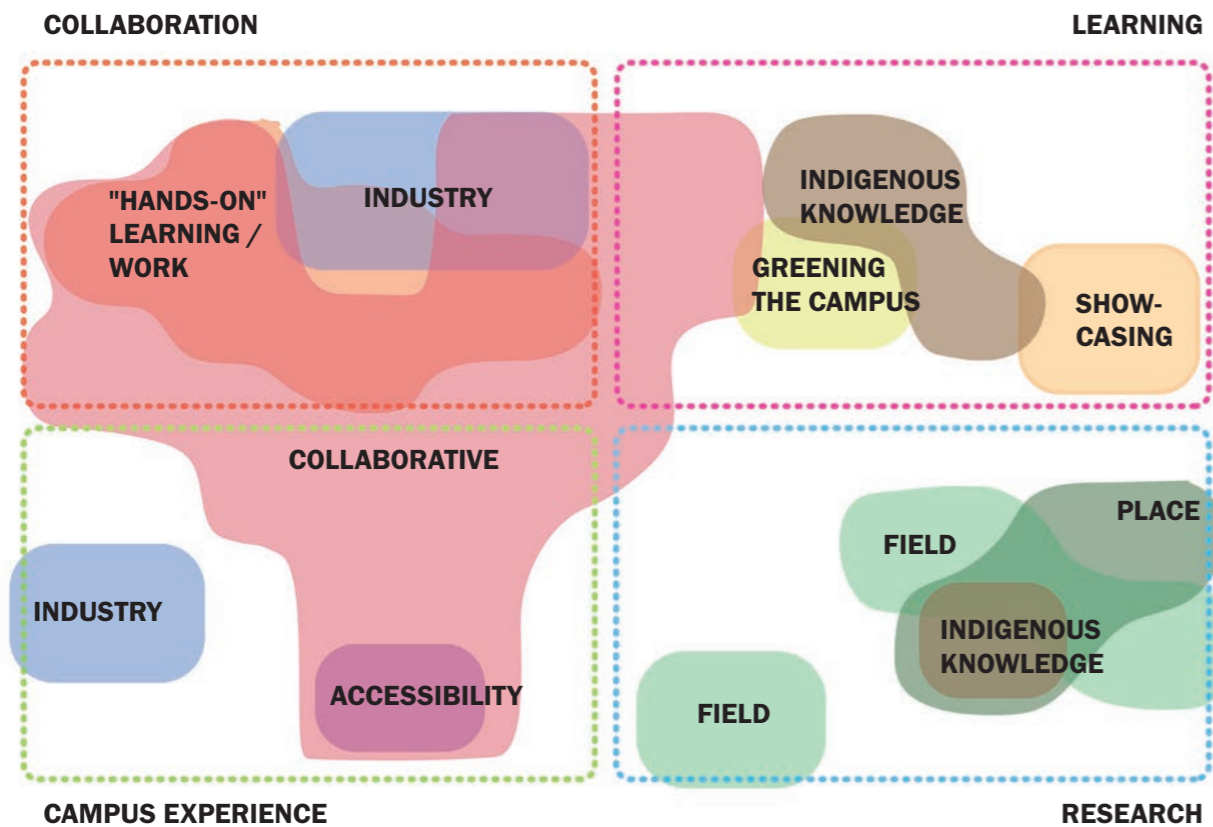
Create inclusive spaces that accommodate diverse needs and promote equal access for all.



RESONATING IMAGES

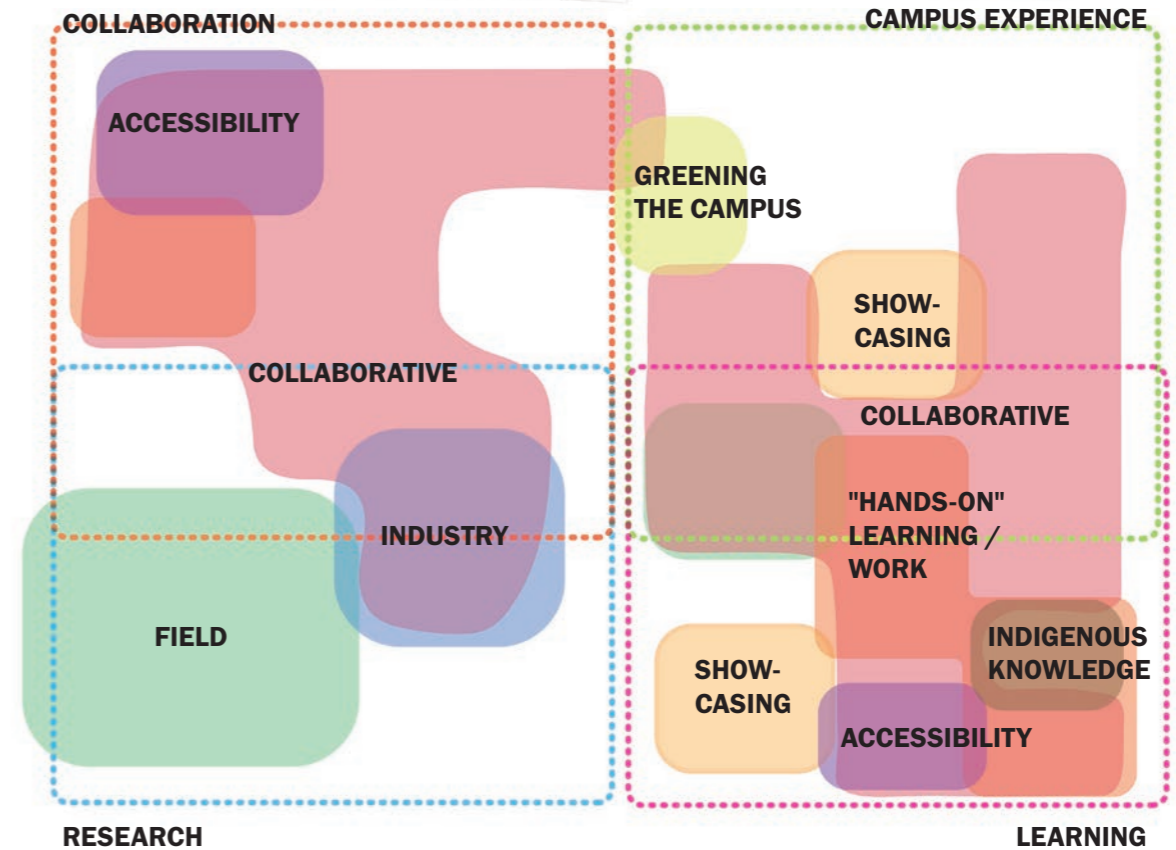


GROUP 1



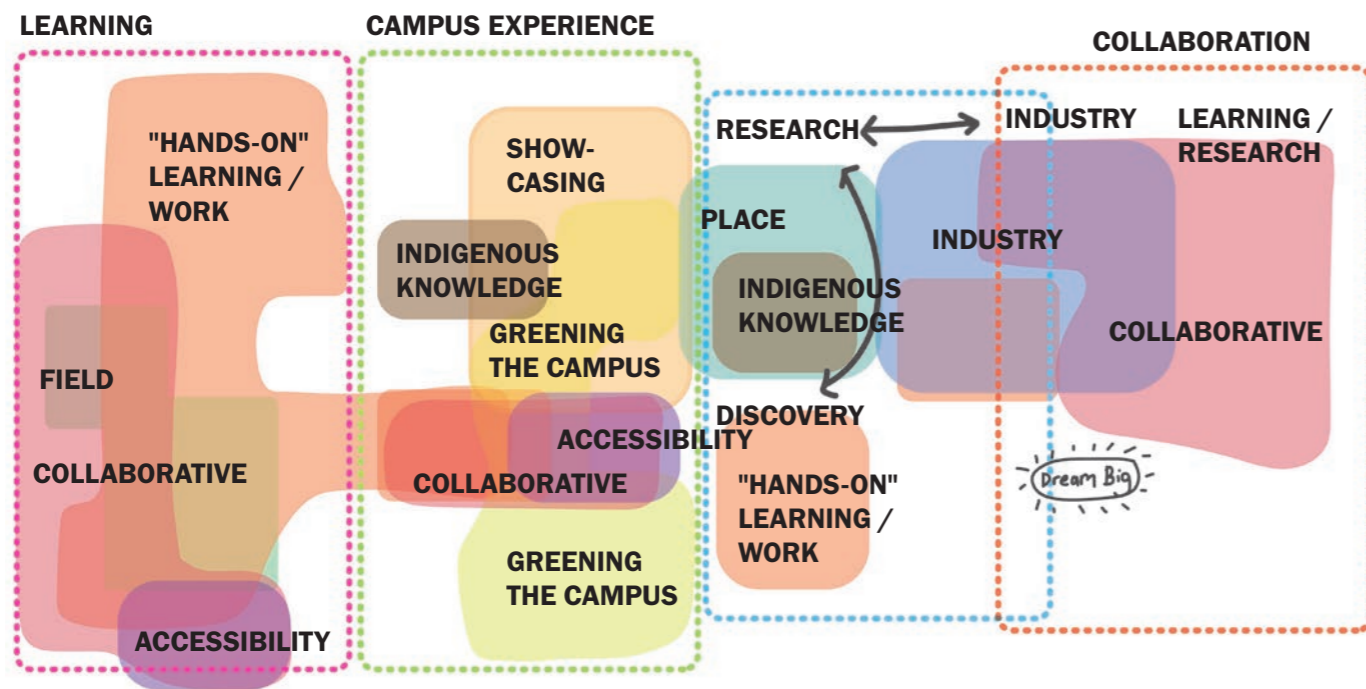
- Group 1 followed the pre-defined categories of collaboration, learning, and campus experience.
- Their research zone emphasized fieldwork and Tasmania-based research, highlighting the strong connection between UTAS and the concept of **"Tasmania as its campus."**

GROUP 2



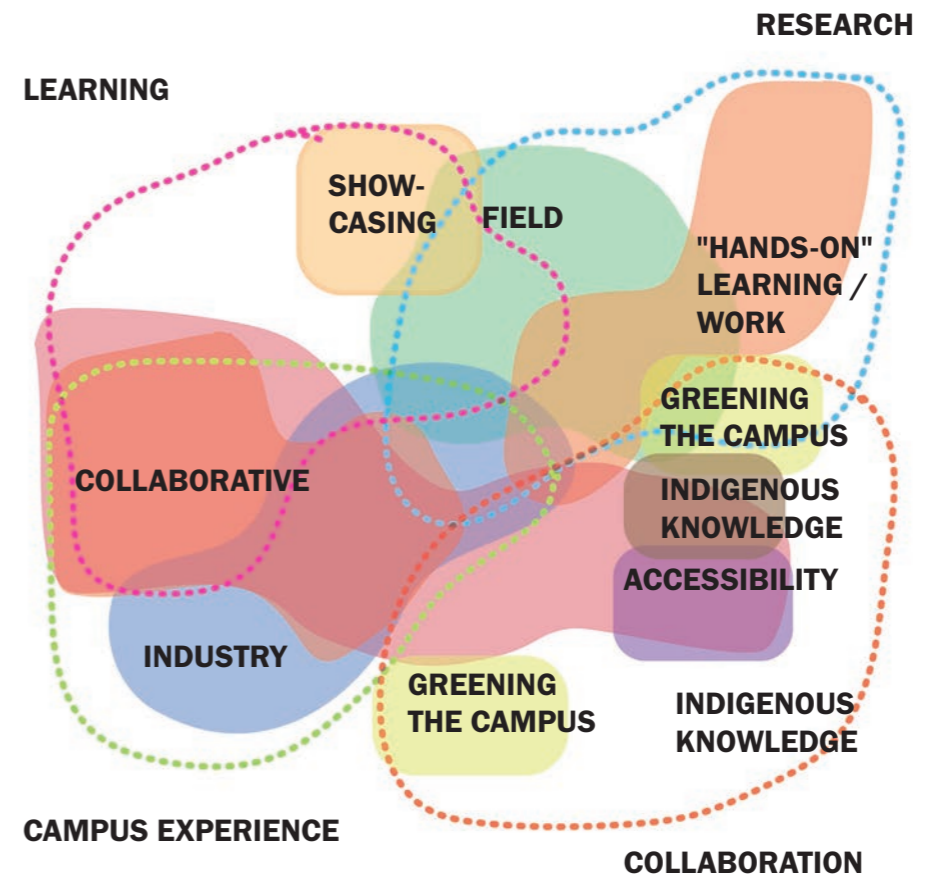
- Group 2 followed the pre-established categories of collaboration, learning, and campus experience. Collaborative imagery was prominently featured across all four themes, emphasizing the **strong value placed on working together in person.**

GROUP 3



- Group 3 embraced the themes of "Dream Big" and "Discovery," recognizing that collaboration was deeply intertwined with learning and research.
- They noted that industry spanned both research and collaboration, further reinforcing this connection.
- Across all themes, images reflecting Tasmania and Indigenous knowledge were prominently featured, highlighting UTAS's deep-rooted commitment to place-based learning and cultural understanding.
- The learning theme was especially dominated by imagery of hands-on, experiential learning.

GROUP 4



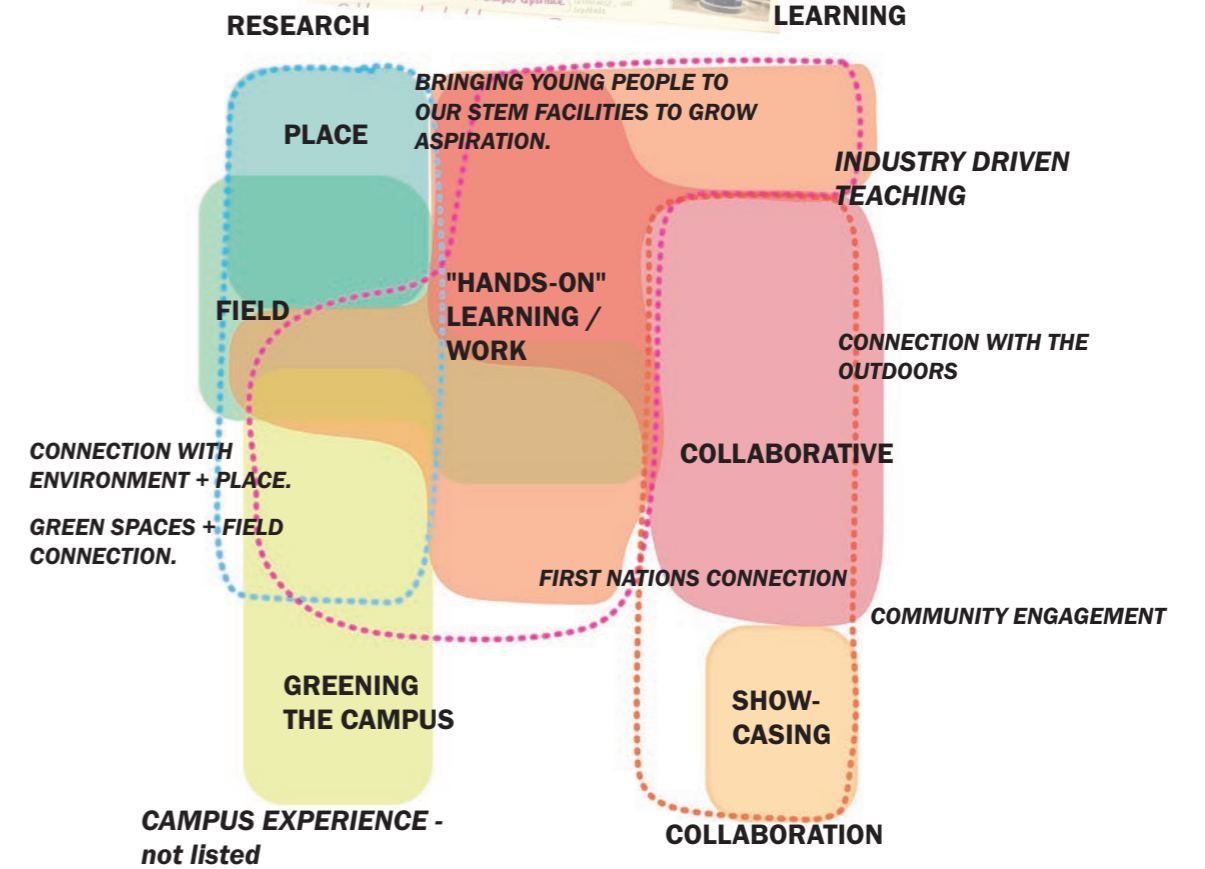
- Group 4 blurred the boundaries between the themes, creating a dynamic vision for the future of STEM in southern Tasmania.
- Their focus was strongly centred on images of collaboration and group learning, emphasizing the importance of working together

GROUP 5



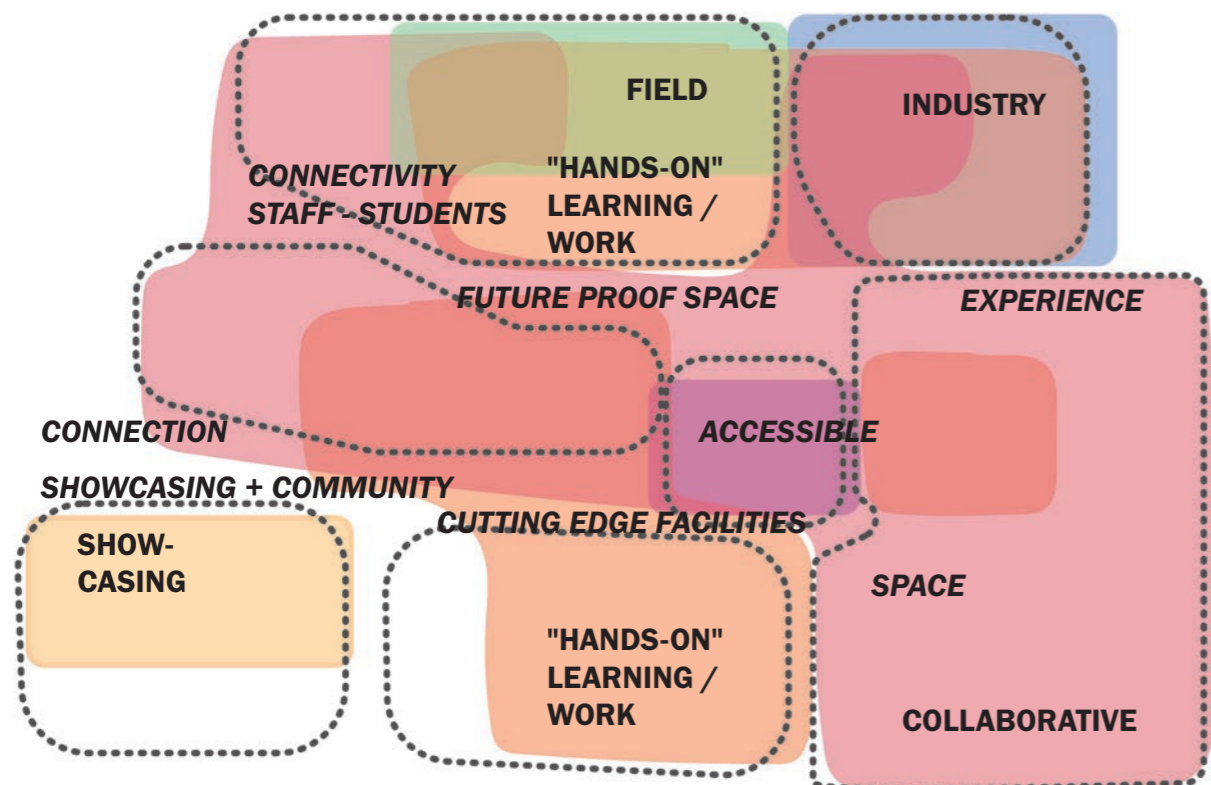
- Group 5 enhanced their boards with annotations that reflected the culture they were promoting, including phrases like "activation of public space," "transparency," "deep tech," and "experiential/hands-on."
- The predominant theme on their board was **hands-on learning** and working, followed closely by representations of place, Tasmania, and fieldwork.

GROUP 6



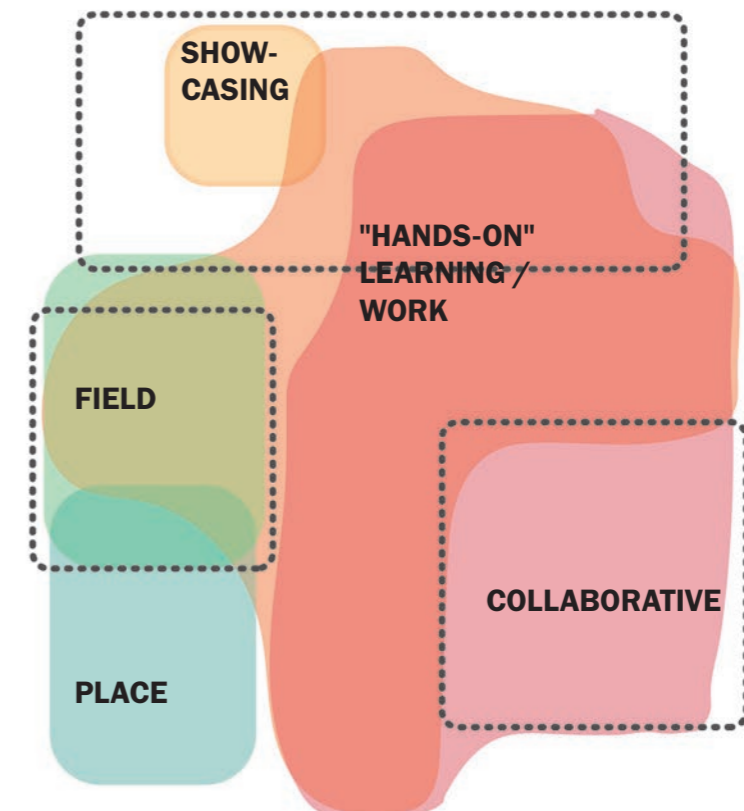
- Group 6 chose not to cluster their images by theme. Instead, they added notes beside each image, highlighting the various themes represented—many images featured multiple themes.
- They also included additional annotations such as "connection with environment and place," "connection with the outdoors," "community engagement," and "First Nations connection." These notes emphasized UTAS's strong ties to place, Indigenous knowledge, and **place-based learning**.

GROUP 7



- Group 7 added annotations to their boards to reflect their values, highlighting concepts like "cutting-edge facilities," "showcasing," and "future-proof spaces."
- Interestingly, they were the only group to specifically mention "**cutting-edge facilities.**"

GROUP 8



- Group 8 organized their images into custom categories, highlighting the themes they considered essential to their vision of STEM in southern Tasmania.
- Their primary focus centred on "**hands-on** learning and working."

05 Design Part 1 + 2 Exercises

After the "Imagine Place" exercise, participants envisioned a cutting-edge STEM infrastructure that would provide an outstanding experience for students, staff, and the broader community. In the next phase, during the "Parts + Whole" design exercises, they were brought back to reality to consider what kinds of spaces, experiences, and relationships would be essential in a new STEM facility.

Design 1: Developing the Parts

In this exercise, participants detailed various space types by specifying their names, functions, activities supported, special requirements, and intended users. This process encouraged them to identify which spaces were most important and essential to a new STEM

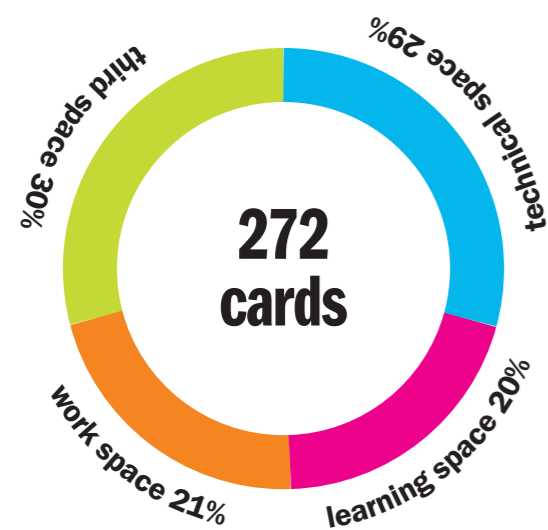
facility at UTAS, while also providing the Hassell team with insights into the spatial needs of these diverse spaces. Given the participants' wide range of STEM backgrounds, their proposed spaces and priorities varied greatly.

Design 2: Creating the Whole

In this activity, groups focused on how to organize the space type cards spatially. Each group employed different strategies, emphasizing different relationships between space types. However, a consistent theme across all groups was the inclusion of a broad range of third spaces that often connected the technical, work and learning clusters.



Design Part 1



In the first part of the Design session, participants created their "Space Type" cards. These cards were divided into four different categories, each represented by a distinct color. To spark ideas, each group received a list of various relevant spaces, but they were also encouraged to add any new or additional spaces they thought relevant to a new STEM intervention.

The four space types were:

- Third Space
- Technical Space
- Learning Space
- Work Space

The exercise intentionally allowed for overlaps in space uses and types. For example, participants were prompted to share insights on whether wet labs should serve as technical, learning, and work spaces, accommodating both research and teaching activities at times.

# occurrence	Category 1	Category 2	Category 3	Category 4
13	workshop	cafe/ retail food and beverage	computer labs	
12	flatfloor classroom			
10	wet lab	storage	auditorium / lecture theatre	private office
8	green space	incubation space, engagement space ideas bazaar		
7	field support	shared office	showcase area, community engagement zone	green space

THIRD SPACE
Space Type: Informal gathering
Description + Activity: A breakout space and comfortable space for all staff and students to gather.
Specific Requirements: Soft carpet? Natural light operable doors to outside... inside/outside connections
User / Occupant #: Less than 50...

WORK SPACE
Space Type: Research Group Areas
Description + Activity: RESEARCH LEADER OFFICE WITH OFFICE AREA FOR THEIR STAFF AND STUDENTS
Specific Requirements: 1 OFFICE WITH OFFICE AREA NEXT TO IT FOR THEIR TEAM
User / Occupant #: 1+

LEARNING SPACE
Space Type: Digital space / room
Description + Activity: Having control over the space... small workstations on wheels... life & work experiences
Specific Requirements: WIRELESS... accessible to anyone... collaborative
User / Occupant #: 1+

TECHNICAL SPACE
Space Type: Wet Labs
Description + Activity: Research & Learning & Teaching Chemistry, Physics, Biological Sciences, Earth Sciences
Specific Requirements: High spec tech requirements for each purpose... Safety considerations... collaborative
User / Occupant #: 1+

THIRD SPACE
Space Type: Cafes
Description + Activity: Cafes with work spaces & connectivity for students & staff.
Specific Requirements: Welcoming... Link to feature
User / Occupant #: 1+

WORK SPACE
Space Type: Work space - support
Description + Activity: printer hub... find office supplies
Specific Requirements: printer / printer related items... Shelf or cabinet for office supplies
User / Occupant #: 1+

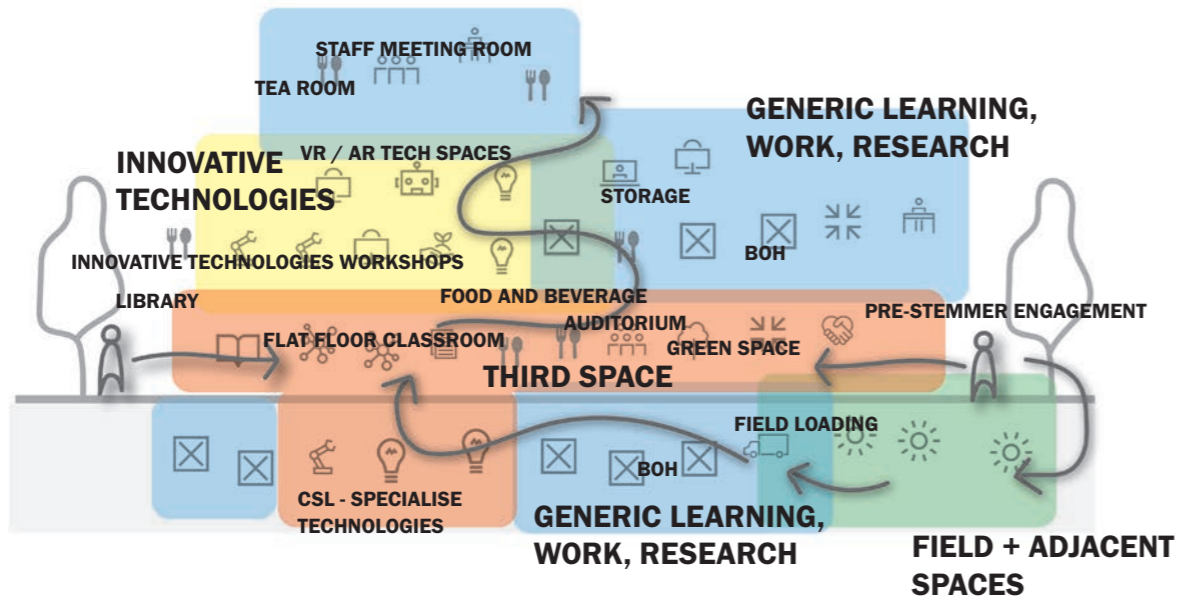
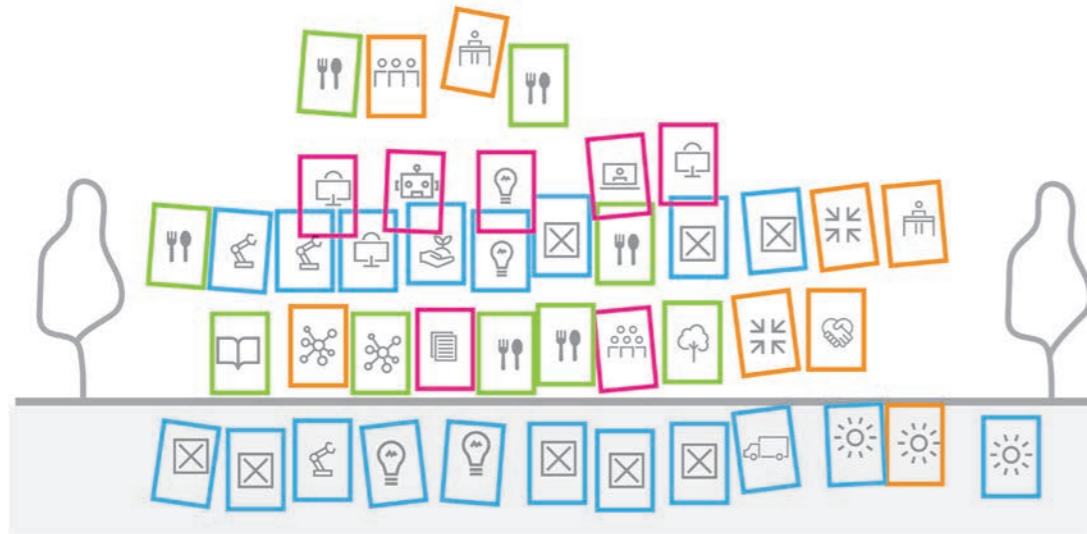
LEARNING SPACE
Space Type: Auditorium
Description + Activity: Large space for graduations, celebrations, community engagement
Specific Requirements: Needs connected catering facilities, amenities, parking, welcome area... Big screen.
User / Occupant #: 1+

TECHNICAL SPACE
Space Type: SPECIALISED RESEARCH CORE FACILITIES
Description + Activity: MULTI DISCIPLINARY SHARED RESEARCH ACCESS WET AND DRY ANALYTICAL LABS
Specific Requirements: SPECIAL REQUIREMENTS ACCORDING TO INSTRUMENT... SUPER RESOLUTION MICROSCOPY - VIBRATION DAMPENING
User / Occupant #: 1+



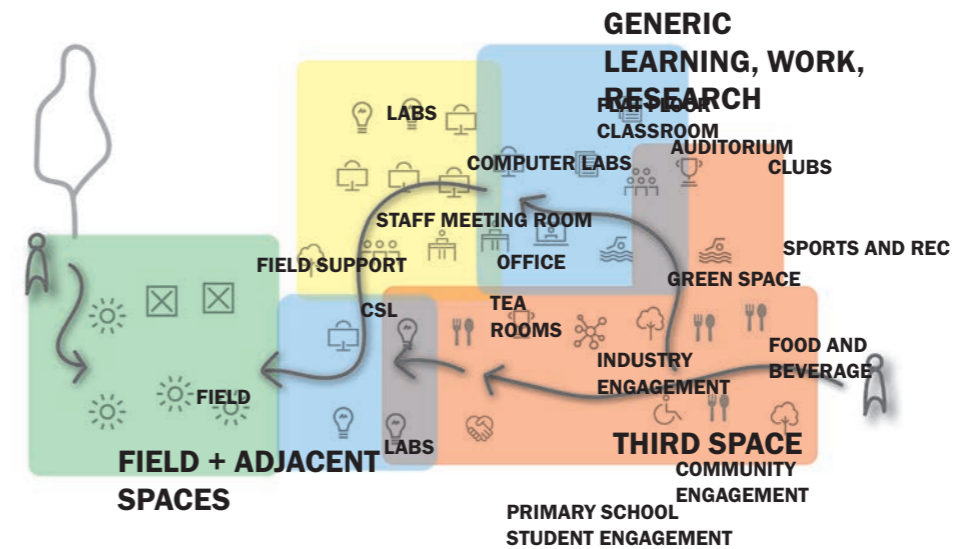
Design Part 2

GROUP 1



- Group 1's approach was guided by a clear organizational logic based on the concepts of "above the line" and "below the line."
- Their vision focused on creating a vibrant and dynamic ground-level experience that fosters collaboration and connection, incorporating social, learning, informal, and engagement spaces.
- They recognized that while some essential spaces are necessary, they do not need to be easily accessible to most users and should not interfere with the primary areas.

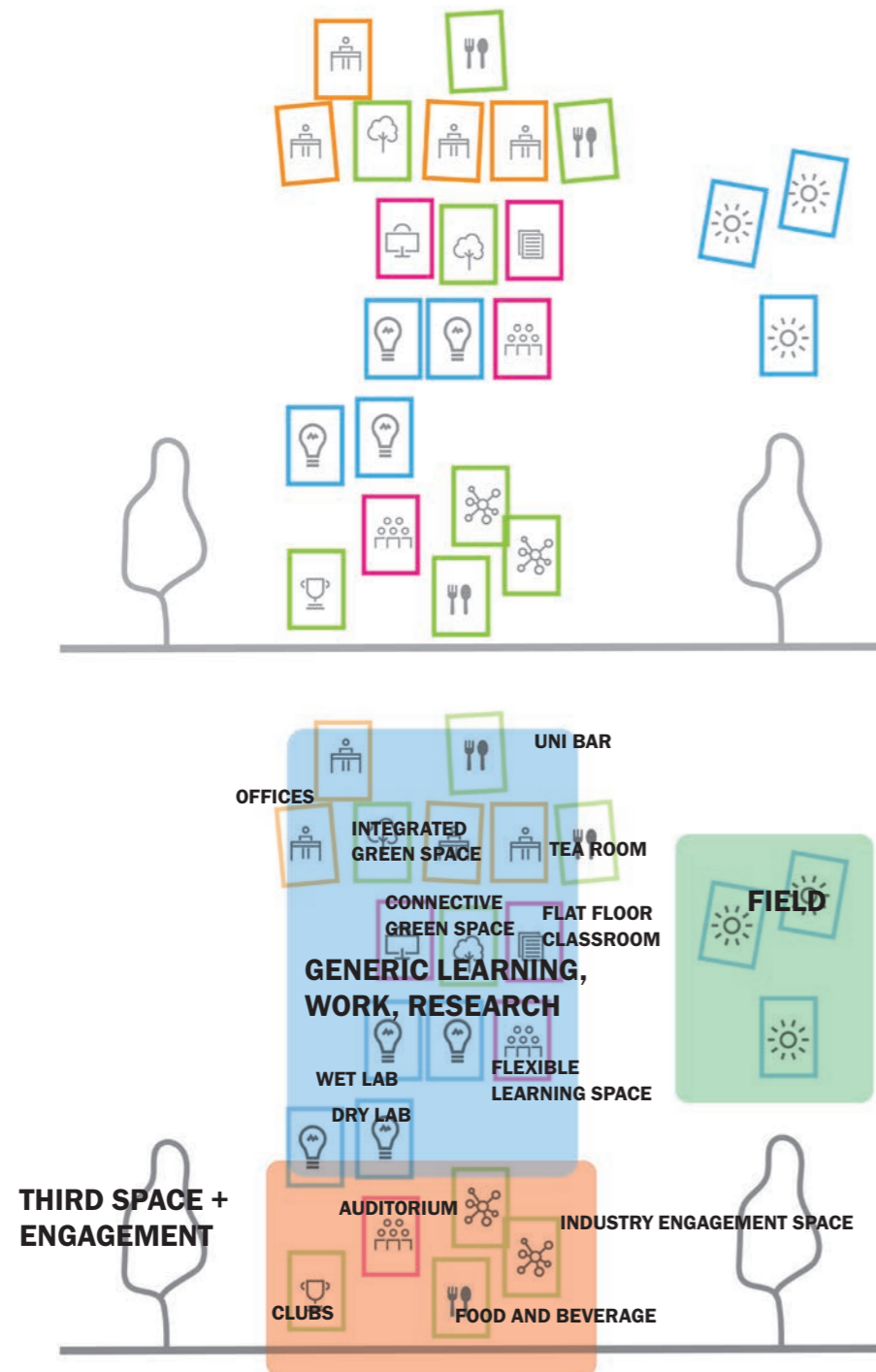
GROUP 2



- Group 2 showed strong interest in diverse third spaces, including sports, recreation, student union areas, and a primary school engagement zone, with a high focus on these elements.
- They placed field stations and support spaces near CSL and labs for convenient testing and analysis.

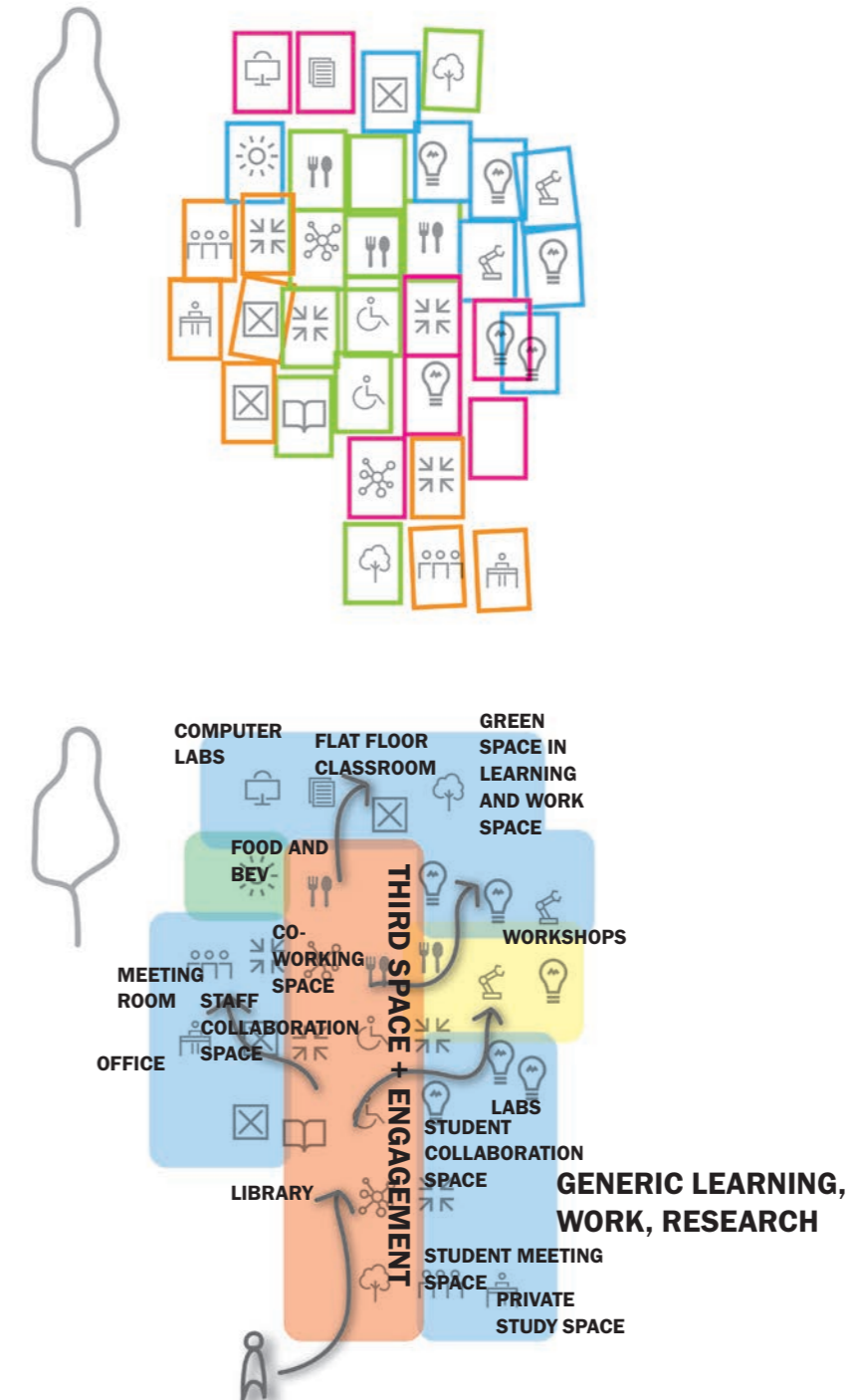
- INNOVATIVE TECHNOLOGY, FUTURE PROOF LEARNING
- OUTWARD FACING + COLLABORATION WITH ENGAGEMENT WITH COMMUNITY, INDUSTRY, SCHOOLS ETC
- GENERIC RESEARCH, WORK AND LEARNING FUNCTIONS
- FIELD

GROUP 3

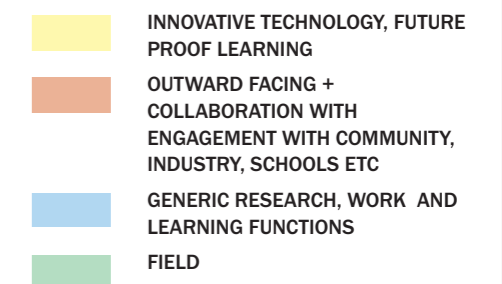


- Group 3 organized their spaces in a vertical layout, with public-facing and collaborative areas on the ground level, transitioning to more private, focused, and formal workspaces as you move upward.
- They incorporated "green spaces" throughout the design, emphasizing the importance of **integrating nature to create a positive, healthy, and comfortable work and learning environment.**

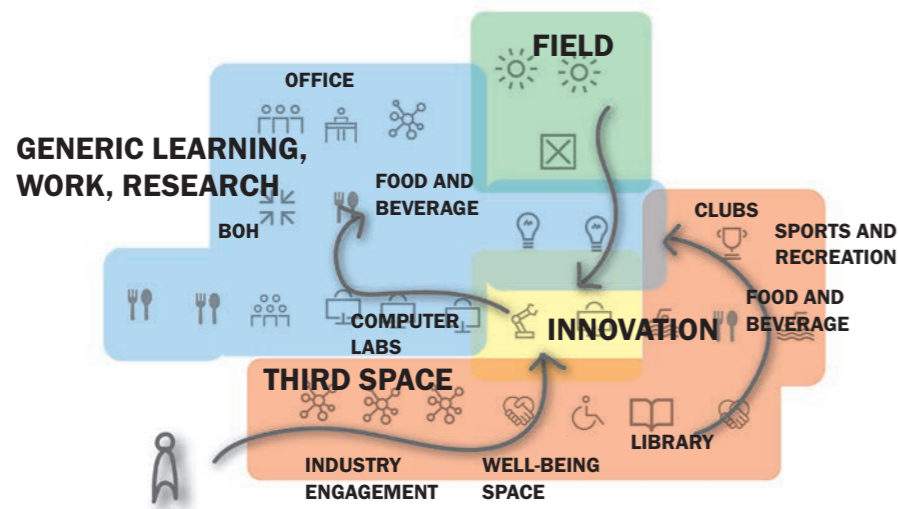
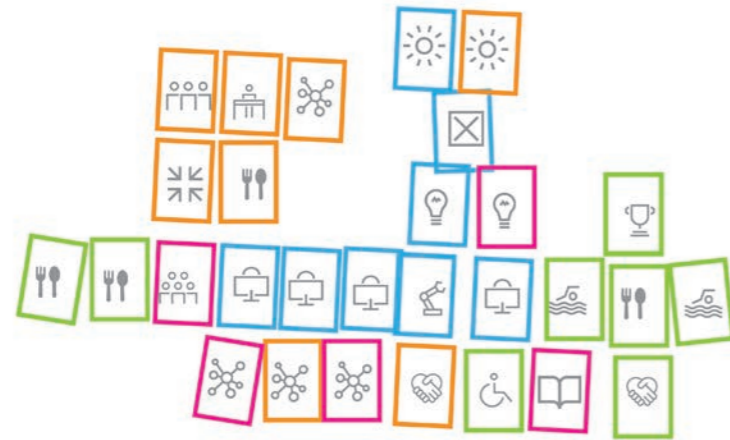
GROUP 4



- Group 4 positioned the third space zone at the center, flanked by workspaces on one side and learning and work areas on the other, creating a balanced connection and **opportunities for visibility and transparency between uses.**
- The workspace they allocated are **less conventional private office spaces, rather focusing on collaborative and shared areas.**



GROUP 5

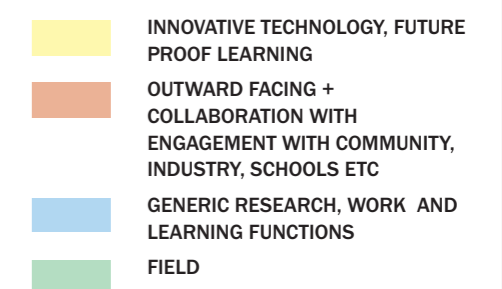


- Group 5 included a wide range of third space uses that wrap around the external edges of the scheme.
- Workspaces are grouped together, while field stations and support areas are clustered near the research labs for efficiency.

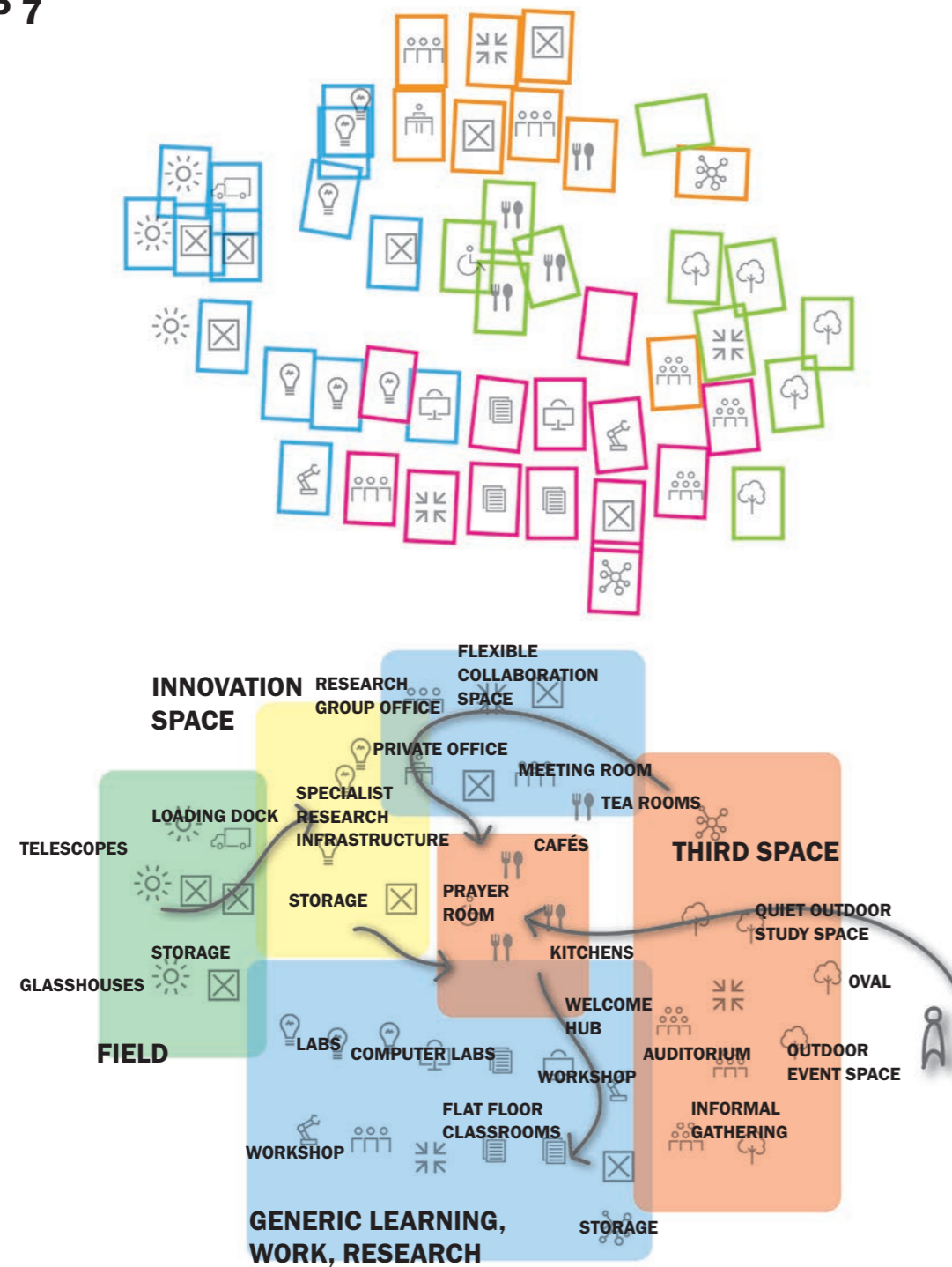
GROUP 6



- Group 6 placed third space zones at the center, bridging the work and learning areas.
- Their design features a **dedicated entrance and welcome space**, emphasizing presence, way-finding, and public accessibility to foster connection and belonging.
- They allocated a **variety of spaces for external collaborators and stakeholders**, including childcare, industry, and primary student engagement.

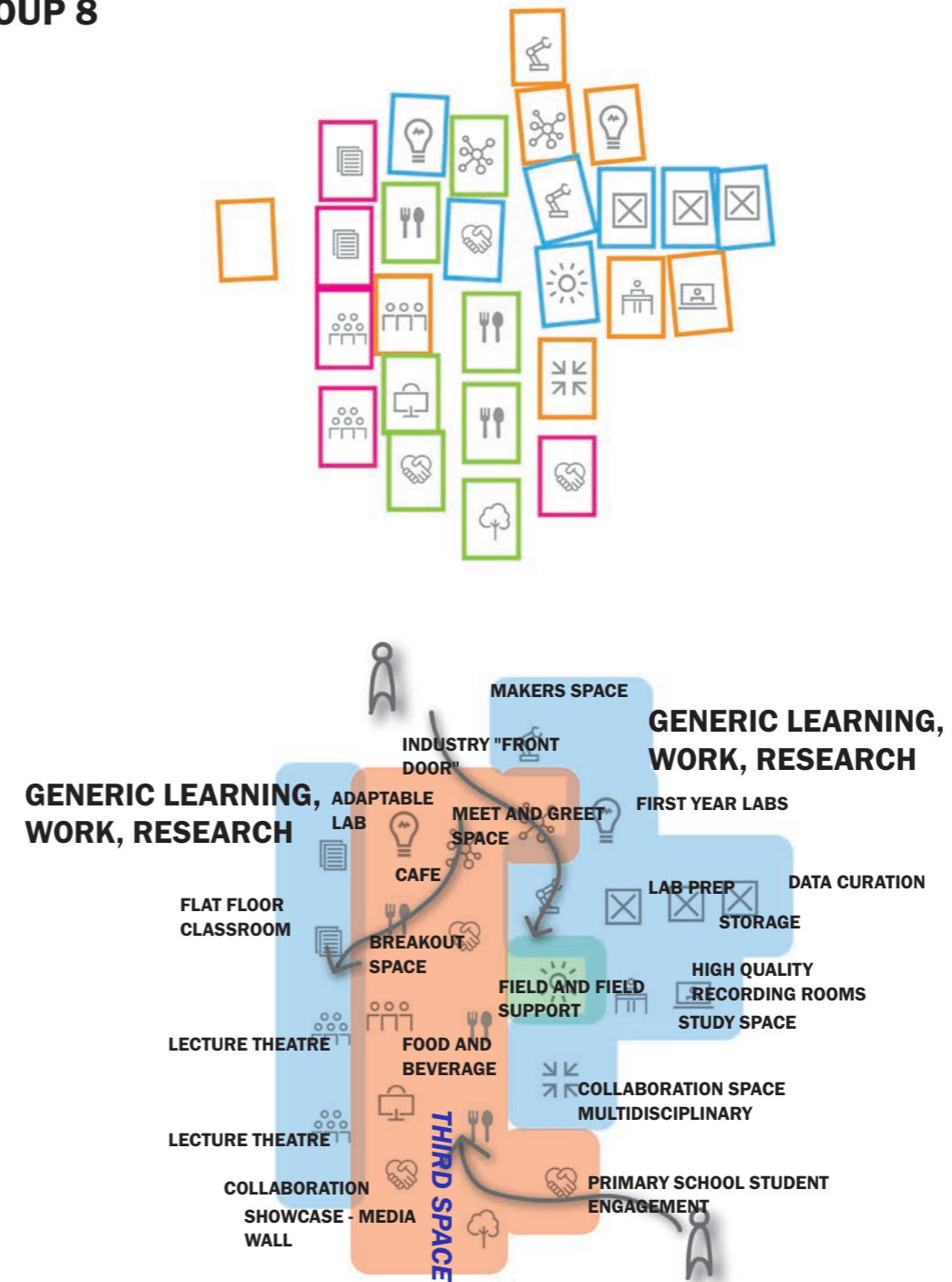


GROUP 7

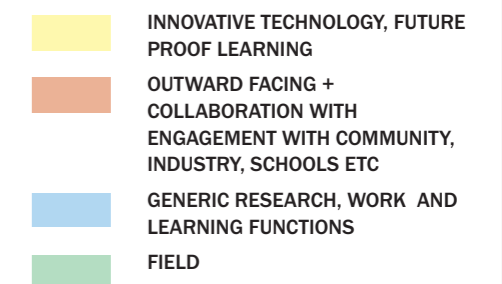


- Group 7 organized their spaces into distinct zones, separating field, third, learning, and work areas.
- Technical spaces are distributed throughout based on their function as either learning or research areas.
- They incorporated several non-STEM spaces, such as an oval and outdoor event area, highlighting the importance of the overall campus experience to the success of the scheme.

GROUP 8



- Group 8 separated generic learning spaces from more specialized learning, work, and research areas.
- They positioned various public-facing functions at the forefront of their design, including a **café, industry engagement areas, a showcase media wall, and spaces for primary school student engagement.**
- Included a high-quality recording room demonstrating the importance of being able to teach over different modalities.



05 Design Parts and Whole Key Take Away:

What ideas, spaces or places do participants believe will support the future of STEM in Southern Tasmania?

Great Front Door + Great Campus Amenity

- Places to Connect (F+B)
- Places to Dwell (including Accommodation)
- Showcasing what is Great about STEM
- Showcasing the STEM Journey

Facilities that Solve Big Problems

- Learning by doing.
- Ecological - *is this the big problem?*
- Circular Economy
- Core Research Platforms/Open Access/No Silos

Collaboration at the Heart / Partnerships are Key

- Transparency + collaboration between staff/ students, students/students, learning/ research
- Within Industry (Big and Small) - Students with industry experience + HDR/Staff with research collaboration
- Community
- School Children/Future STEMMERs

Ideas from Anywhere/ The Whole Of Tasmania As Campus

- Multiple interconnected campuses
- Field stations
- Campus connected to surrounding ecosystem

TECHNICAL SPACE TYPES

Space type	Description + Activity	Specific requirements	User/ Occupant	Space Type Occurrence
WORKSHOPS - FABRICATION - REPAIR - MAKERS SPACE	High end custom fabrication for prototyping and research Maintenance and repair for equipment. Eg field equipment or experiments.	Storage, advanced and basic machinery, large access Markers space, access tools and resources Can allow for long term project development	Staff, students, industry	13
WET LAB	Learning and research Molecular biology, plant science, chemistry, eng, psychics, geology.	Accessible to all. Flexible, adaptable where possible High spec tech requirements Safety considerations Collaborative	Staff, Students, industry	10
STORAGE	Device store eg VR, cables, Rock store	Big space, accessibility, loading access, access to lab/learning space Freezer storage Bio security storage Shielded storage	Staff, students, industry	10
FIELD SUPPORT	Infrastructure to support field work	Storage, wash-down, fleet parking, recharging Portable classroom into the field	Staff, students	7
RESEARCH SPECIALIST INFRASTRUCTURE	Multi disciplinary shared research access Pyrotron - our fire research team burn things to research bushfire risk	Need capacity to grow with new research that emerges Close to storage, x ray, radiation, dangerous chemicals, Pyrotron - our fire research team burn things to research bushfire risk	Staff, students, industry	4
DRY ANALYTICAL LAB		Close to storage, vibration, dampening	Staff	4
DRY TEACHING LAB	Labs equip with plant, inset diagnostics	Microscopes, fridges	Students	3
LOADING BAY	Vehicle loading	Proximity to storage	Staff	2
CSL	High spec analytical equipment	Stability, shielding, enclosure, strength, isolation	Staff, industry,	2
FIELD SUPPORT	Infrastructure to support fieldwork	Storage, wash-down, fleet parking, recharging	Staff, students	2
SUPER LABS	Biology,	Can be shared with other disciplines	Staff, students.	2
DATA PROCESSING CLUSTER, SUPER COMPUTER	High volume data processing, Super computer	Virtual access from anywhere	Staff, industry,	2
DIRTY LAB	Lab for processing dirty samples	Range-hoods, ovens, fridges, chemicals, sample processing, bench space	Staff, students.	2
ANIMAL HOUSING FACILITIES				1
PREP ROOMS	Prep rooms to prepare samples for analysis	Grinding, wet spaces, soil traps, vacuum, aeration	Staff	1
SERVER ROOM	Tech / research requirement	Air conditioner or cooler	Staff	1
GLASSHOUSES	Research and learning	Proximity to lab, office, and learning space	Staff, students, industry	5
FIELD STATIONS	Mixed	Mixed	Staff, students. Industry, community	8

Not located within STEM facility

LEARNING SPACE TYPES

Space type	Description + Activity	Specific requirements	User/ Occupant	Space Type Occurrence
COMPUTER LABS	Room with computers, open layout	High powered computers with associated tech Generic computer labs	Staff, students	13
FLAT FLOOR CLASSROOM FLEXIBLE CLASSROOM	Generic classroom for: Mathematics Flexible and modular furniture to allow for different set ups/ arrangements	Tutorial room with audio/visual connectivity Whiteboards/ writing surfaces Proximity to labs, Collaborative layouts	Staff, students	12
AUDITORIUM/ LECTURE THEATRE	Large, well lit and comfortable lecture theatre Used for formal learning, community events, graduations, conference etc	Audio visual enabled, Comfortable, Shared with many disciplines, community etc Kitchen/event space adjacent	Staff, students. Industry, community	10
INFORMAL LEARNING FOR SCHOOL STUDENTS	A space for school students to create engagement with future stemmers	Good access, diversity in spaces, indoor/outdoor Touch and feel and play space Living exhibits	Staff, students. Industry, community	5
GRITTY/INNOVATION/ COLLABORATION SPACES	Informal student collaboration spaces that allow students to 'occupy' space	Walls to be drawn on, posters stuck on, relaxed furniture, Potentially noisy spaces	Staff, students. Industry	4
BOOKABLE GROUP OR PRIVATE SPACES WITH ZOOM/TECH CAPABILITIES	Online learning space	Screens/online capabilities, wont disturb colleagues/other students	Students	3
LIBRARY	Library space, with resources, books and a variety of study and learning spaces	Books, study spaces, collaboration, access to computers	Students, community	3
INFORMAL LEARNING SPACES	Flexible furniture, quiet + noisy spaces, breakout spaces	Dial in audio/visual capabilities	Students	3
DIGITAL TECHNOLOGY SPACE	Vr, AR experience room	Accessible to anyone... Compatible with latest technology	Staff, students. Industry, community	3
STUDY SPACE	Quiet study zone	Variety of furniture options	Students	2
LOCKERS/TRANSIT SPACES?? THIRD SPACE?	Personal item storage			1
OUTDOOR CLASSROOM/ LEARNING SPACE	Space set up for outdoor learning	Shared amongst disciplines, proximity to other schools	Staff, students. Industry, community	1
CENTRAL HUB / STUDENT SERVICES	A space for students, staff, industry to go to with questions	Centralised space	Staff, students. Industry, community	1

WORK SPACE TYPES

Space type	Description + Activity	Specific requirements	User/ Occupant	Occurrence
PRIVATE OFFICE	Focused, individual workspace	Ergonomic, sound separation, comfortable Proximity to labs	Staff	10
SHARED OFFICE	A shared office space for HDRs	Natural light, collaboration space, focus space, proximity to labs Transparency	Staff, students.	7
MEETING ROOMS	Flexible meeting rooms	Proximity to offices and open plan desks	Staff, students, industry	5
OPEN PLAN DESKS, INFORMAL		Proximity to meeting rooms, storage, support facilities Variety of spaces, some quiet, some more collaborative	Staff	5
MULTI - DISCIPLINARY RESEARCH COLLABORATION SPACE	Stem + humanities research collaboration for diverse ideas and engagement	State of the art facilities	Staff, students, community, industry	3
RESEARCH GROUP OFFICE AREAS	Research leader office + supplementary area for their staff and students adjacent	1 Office w/ open planned workspaces / lab space	Staff. Students	2
FLEXIBLE, LEASEABLE WORK SPACES, CO WORKING	Flexible, start up spaces, industry friendly,	Co-located with students + staff Modular furniture, Standing desks,	All	2
INDUSTRY HUB		Shared building spaces, equipment to nurture interaction and enable engagement	Staff, industry?	2
RECORDING ROOMS	Rooms to record lectures, classes	Optimal acoustics and visual	Staff, students, community, industry	2
CLEANING	Cleaning bays	Water recycling	Staff, industry	1

THIRD SPACE TYPES

Space type	Description + Activity	Specific requirements	User/ Occupant	Occurrence
CAFÉS/RETAIL FOOD AND BEVERAGE	Cafe with workspaces. Offers opportunity for connectivity for students and staff	Welcoming, Links to nature Affordable food options Healthy food options Convenience store	Staff, students. Industry, community	13
GREEN SPACE	Inside/outside	Greening all spaces	Utas staff, students, industry, community	8
INCUBATION SPACE, ENGAGEMENT SPACE IDEAS BAZAAR	Industry and hdr collab spaces	Flexible spaces, cutting edge technology, Usability Pitch to industry/market	Staff, students. Industry, community	8
COMMUNITY / INDUSTRY ENGAGEMENT SPACE/ DISPLAY EXHIBITION SPACE	Interactive displays space for community	Dedicated space and resources for interactive displays	Students. Industry, community	7
TEA ROOMS, STAFF LOUNGE	Staff tea rooms to inspire collaboration and conversation Within disciplines and inter disciplinary	Location, inviting, responsibility for upkeep	Staff	7
INFORMAL GATHERING INDOOR	Breakout space, comfortable for all students and staff	Natural light, Inside/out connections	Staff, students, community	6
INFORMAL GATHERING OUTDOOR	Allow for socialising, collaboration, Events, markets	Outlook, diverse activities catered for, BBQ	Staff, students, community	6
CARER / PARENT SPACES / CHILDCARE	Place for children of students can be	Surveillance	Community, children	5
EQUITY SPACES	Spaces for neurodivergent staff and students, prayer room contemplation connection,	Proximity, easy access Non-sensory spaces	Staff, students. Industry, community	3
OPEN KITCHENS	Space to prepare and enjoy food. Large and communal	Practical surfaces, natural materials, comfortable furniture	Staff, students	3
WELL-BEING SPACE	Bulk billing GP, mental health support, social work, career planing	Comfortable, proximity	Staff, students. Community	3
CLUB SPACES	Space for social/student experience	Storage, meeting, event, food and beverage, study space	Staff, students. Industry, community	3
BAR	Social, vibrant space for all to come together	Accessible, inclusive, performance	Staff, students. Industry, community	3
ENTRANCE/ WELCOME SPACE	Central hub, informal spaces, vibrant, inclusive	Accessible	Staff, students. Industry, community	2
GYMS/SPORTS FACILITIES, STUDENT HOUSING			Staff, students. Community	4 2
TRANSPORT OPTIONS				1
BUSH SPACE				1

Not located within STEM facility

07 Deliver + AI Action Planning

The Ai Action Plan asks participants to identify the key things that need to happen in order to realise their future aspirations. The focus is on the Facilities required, who needs to be involved in partnership to make it happen, what the Design and Success Factors are, what site or location specifics need to be considered and that other systems or processes need to support or complement that Facility.

The data from this exercise revealed that participants identified what facilities were missing, what things they currently had that were core or fundamental to what they would be doing in the future and what things were needed to support their future aspirations.

From this data the project team, based on the review of existing facilities, has suggested what could be incorporated into new facility and what could be fruitfully refurbished on Sandy Bay, and what facilities are needed off Sandy Bay.



07 Deliver + AI Action Planning

What do the participants think is missing?



Innovation Hub + Industry Collaboration Space

- On campus
- Off campus
- Embedded in CoSE/STEM



Interdisciplinary Workspace

- Shared workspace/ Communal Areas
- Core Research Facility



Community/School Engagement Space

- Showcasing STEM
- Exciting Tasmania
- Interactive Experiential



World Class Facilities


- Not all STEM facilities are best of class (some are, but not all)
- Teaching facilities with latest tech capabilities



Third Spaces


- Well-being Space
- Food and Beverage
- Dwelling Space

What do the participants think is working?




Network of Field Facilities

- Tasmanian as campus
- UTAS campus network




Specialist Facilities

- Core Research/Open Access
- Glasshouses
- High Powered Computing



General Flexible Facilities

- Research Labs
- Office / workspace
- Upgraded Teaching Spaces



Passionate UTAS Community

- Student Clubs, TUSA
- Staff tea rooms

07 Deliver + AI Action Planning

What are we suggesting for the future?



New facilities / uses included in new STEM proposal:

- Collaborative workspace/work hub with industry
- Experiential Museum
- Hands-on Teaching + Highly-Accessible+ Visible Research Facilities
- General Teaching + Event Space
- AR/VR + High Powered Computing
- Food and Beverage / Well-being Space
- Interdisciplinary Collaboration/Communal Zones
- Centralised Field Support Infrastructure



Refurbish Existing:

- Core Research
- Glasshouses
- Green Space + public open space
- Connections across campus



Cultivate + Promote:

- Field research



Inspiring Tasmania

- Showcasing STEM Futures to **all Tasmanians** that generates excitement about Tasmania's global contribution to solving the the challenges of the 21st Century.
- Leading the global initiatives driving the preservation and remediation of nature spaces, shifting to a circular economy, and sustainable futures including minerals.
- Inspiring **school children** to pursue STEM careers to be part of Tasmania's exciting further.
- Partnering with **Industry** and becoming their first stop in the search for sustainable and productive economic futures.

Facilities	Partners	Design/Success Factors	Site Requirements	Complementary Elements
FORGE + BIZARRE (IDEA INCUBATION / GENERATION) MAKERS SPACE/COLLAB LAB	Industry + Govt. + Community TAFE	Street frontage Nos. Of partners Easy + flexible entry + exit points Open 24/7	Appropriate security + access Keeping stem cohorts together, > access to multiple partners in utas Visible and accessible	Start up grants to enter High profile / visibility
INDUSTRY ENGAGEMENT SPACE	Industry Government Policy UTAS	Profiling employment outcomes "Cant be what you cant see"	Co-sharing work space Mission/impact grouping Work experience	
SCHOOL STUDENT / COMMUNITY ENGAGEMENT SPACE	UTAS DECYP Schools - state and independent TMAG TAFE Families Community groups Department of Community	Accessibility Experiential, engaging, Inspirational Stimulating Visibility + stem transparency Welcome Safe Adult + children space	Eg science museum, hands on /practical - Questacon style Exhibition space Visibility (materials) Interactive/hands-on Location Transportation Food stalls, cafe, bar, campus store	School curriculum for teachers Scheduling with school terms /semesters How can stem impact the world? Campus tour part of experience. Creating early connection to high education welcoming spaces
LARGE CAPACITY EVENT SPACES	Students COSE and UTAS	Flexibility	Large, flexible Multi purpose /flexible Divisible	Capacity for community events, differentiated from competitors
UNI BAR/ SOCIAL HUB / CAFE	Students + union Run by students	Bar by night, cafe by night Affordable food service Alcohol + non-alcohol	Prominent position Green space Flexible Accessible + visible eg. Lazeby's	Complimentary to staff club Open to public Capacity to do events Potentially across 2 levels of building
STUDENT WELL-BEING HUB	TUSA, UTAS, services providers eg GP	Multiple facilities supervision/ society officers. Affordability.	Homely, community connection + safety Central GP services Financial counselling Accessibility services	Parking + drop off Support workers
COSE INTERDISCIPLINARY WORK SPACES	UTAS - COSE Behavioural Lab Psychologists	Co-location of academics	Breakout rooms, communal social area, tea room Access to work spaces	
GREEN SPACE	Botanical garden, UTAS, community	Good soil, light, close to workspaces. Seating, places to talk or reflect	Throughout the campus, Easy access from spaces	Essential to stem researcher well - being + student
CENTRAL COMMUNITY HUB FOR COLLABORATION AND CONNECTION	Staff, students, community, support services	Critical mass Cheap food for students Coffee	Accessible to community welcoming environment, security (safety)	
LEARNING AND TEACHING FACILITIES	All of cose disciplines/all of UTAS Students Community Industry Connections Schools	Visible/open Inter-connected Flexible Modern/world-leading Accessible Sustainable Leverage Tasmania/place	Levering Tasmania/place Accessible Connected to other parts of uni	Student pathways Government Key stakeholders Inclusivity, community Knowledge dissemination and generation
LARGE LECTURE THEATRE/AUDITORIUM		Adaptable for future	Enough desk space for attendee Hybrid learning: good recording / zoom capabilities	

Facilities	Partners	Design/Success Factors	Site Requirements	Complementary Elements
TEACHING LAB - SOME SHARED - SOME SPECIFIC	Tas Education TAFE	Zero carbon High utilisation Industry aligned/similar Jobs ready graduates Multi-purpose, flexible, interactive, Experiential learning	Accessibility Large prep room, storage Enable sharing of lab where appropriate Flexible furniture	Child care Entry pathways Maintain discipline identity
RESEARCH FACILITIES	Beneficiaries Government Funders Industry partners Community	Needs/purpose driven State of art Flexible Adaptive	Connectivity Accessibility Technical + specialised separation Experiential learning	Knowledge generation+ dissemination + application Partners in-situ Government Shared facilities with other agencies
LAB RESEARCH FACILITIES	Industry Government			Student satisfaction Industry satisfaction High utilisation
HIGH POWERED COMPUTER HUB	Industry Government	High capacity storage + processing power. Big data	Cooling required.	Teaching + research
FIELD SUPPORT STATION/MUDROOM	COSE	Get dirty/clean> wash down / up	Chemical storage Hazmat Bench and storage space Book a ute into it	Alignment to csl so as to take and analyse samples Vehicle parking Ev charging ports
GLASSHOUSES + GROWING SPACES	Industry, Government, ARC,	Fully equipt, different environments with controls.	High quality light (no shade) Accessibility	Integrated - school kids able to go through.
FIELD RESEARCH SITES	RDC Government TLC Public outreach	Secure storage of equipment + nearly undisturbed outdoor spaces Space for field training Boat storage	Easy access for heavy equipment Large outdoor spaces, secure Natural environment	
MOBILE FIELD STATIONS	Industry Government Public	Accommodation Toilet facilities Modular design	Access via track of aviation	Act as outreach + research facility
AFFORDABLE STUDENT HOUSING	Homes Tasmania	Different styles: Shared dorms, studios, 30% incomes subsidized housing.	Close to uni campus	Public transport Jobs network - support employment in proximity
WORKSHOPS - ENGINEERING -RESEARCH PROTOTYPE CUSTOM MANUFACTURE CORE OPEN ACCESS RESEARCH PLATFORMS	Industry Government			

- TECHNICAL
- LEARNING
- WORK
- THIRD

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