

1.0 BUILDING PEDAGOGY

HOW IS A BUILDING PEDAGOGICAL?

For all of the power of architectural images – of singular buildings or expressive forms – it is the design of “relationships” that is at the core of architectural practice. This notion of architecture as a “relational art” is not to deny or underestimate the impact of form, materiality and image within the physicality of an architectural intervention.

Pedagogy and pedagogical structures rely on the spatialisation of the relationships between student and teacher, between student and student, between direct education and other activities, between one discipline and another, and between the institution itself and the encompassing world.

From a symposium under a tree to a lecture hall, studio, classroom, gallery, corridor or amphitheatre, the disposition of one individual to another or groups of individuals to other groups sets in motion how knowledge is transferred and created and is further implicated in the formation of cognition and understanding.

If **LAB** architecture studio professes any demonstrable abilities and expertise, it is in providing a critical and creative awareness of how architecture can re-conceptualise, adjust, alter, and transform the diverse and ever-changing relationships within and between institutions and their constituents.

Therefore, the unassailable task of this important project lies in undertaking the difficult work, the critical work, of both imagining the future of a creative education and of creatively constructing that future by means of specific and deliberate spaces, forms, encounters and environments.

SPACE SHAPING

LAB understands the importance of centres of education and supports the cultivation and development of ideas, innovation, creativity, diversity, and information dissemination through these spaces. Our ambition through collaboration with Melbourne University ABP Faculty is to collaboratively create an outstanding work of architecture, in both appearance and performance.

It is not appearance alone that defines architecture, but the building's aspiration and ability through its image and spatial experience to both create and foster new sensibilities; the multiple understandings of the building as an engaged and open experience.

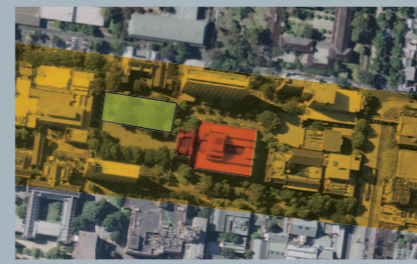
Performance is the area where architecture does its important and apparently invisible work: productively organising components of a building's programme through their functional formulation, flexibility in layout, adjacency and ongoing adaptation. At the core of this understanding is the recognition that the spatial organisation of an institution directly impacts upon its operation, communications and importantly its ability to keep on re-invigorating itself.

PROJECT TEAM

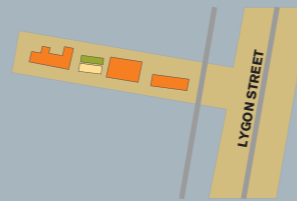
LAB's project leadership is supplemented by the strategic design consultancy of **DEGW** and the multidisciplinary engineering practice, **ARUP**.

These companies bring to the project a comprehensive understanding of new types of learning spaces and a set of complimentary project experiences across the tertiary sector. This added value ranges from specialist research and design expertise, concept and design abilities plus extensive project experience which are all relevant + appropriate to the challenge of the UM_ABP new faculty.

The nomination and participation of a series of esteemed international practitioners: Jeffrey Kipnis, William Lim, Patrick Bellew and Paul Morrell are intended to ensure all faculty disciplines are creatively and critically involved with the design process, productively engaging it in innovative ways as a unique teaching tool.



University Campus



Cultural Connection



Culture Village, Dubai



Federation Square: Courtyard



Federation Square: Plaza

NEW CONNECTIVITY

The new UM_ABP faculty building plays an important urban role through its key position on campus. It allows the generation of a more activated zone linking the student union facilities, Union Lawn and the Ian Potter Museum together as a consolidated activity linkage extending the diversity and activity of the adjacent Lygon Street precinct more identifiably into the domain of the university.

This urban engagement will give literal expression to dissolving and opening the boundaries between the university and the outside world through its immediate local context, reflecting the international trend towards strengthened relations between the universities, community and industry.

It also recognizes the increasingly important role of communal and social spaces with university buildings, with the activity mix including shared facilities, lounge and gallery areas supplemented by commercial retail and food + beverage facilities. The direct opening of some of these activities onto public spaces will generate increased ground floor activation, in turn providing a stronger and more safely defined public domain.

The activation the building creates through greater transparency has a secondary register by literally revealing the school's multiple activities to the campus through activated foyer spaces, public exhibition galleries, interior forum and discussion spaces, display of ongoing work throughout the building's circulation pathways as well as the building's inevitable all day, around-the-clock occupation

LEGIBILITY OF PUBLIC SPACES

An inherent issue in realising the UM_ABP's potential is providing a coherent spatial and organisational legibility, so its multiple addresses and ground floor activities are clearly and distinctly identifiable within the overall campus's urban engagement and the building's architectural design. This has an internal corollary through the internal experience of the building revealing its distinct spatial structure and location of key functional components which fosters both spatial intelligibility and internal connectedness.

This insistence also applies to the negotiation of the disciplinary order within the building, which needs to acknowledge that the disciplines form a federated whole (1+1+1=1) where the increasing tendency is for their individual definition to be subsumed by the more fluid dynamic of an inter-disciplinary structure.

This is a key quality of all **LAB**'s realised and design projects, exemplified in Federation Square's integration of separate cultural institutions, internal and external public spaces, specialist event spaces and commercial activity in one coherent development.

BUILDING AS A TOOL

The building provides a unique teaching tool; actively engaging each discipline with the UM_ABP faculty so that all aspects of the building's design, development and construction, as well as its post occupancy performance contribute to the establishment of a living laboratory:

- creating an active case study from the beginning of its design process, through to the development and documentation of the building and its ongoing maintenance and operational assessment
- establishing the school community as an active participant within the building's evolution in a practical and design focused way
- utilising both ongoing user feedback + environmental performance data it can be a live, readily at hand experiment offering a unique resource
- providing an extended design potential including orientation, signage, integration of media, communications systems and public art

If successful the building also becomes an exemplar for the campus, an attractor for students to study at the University of Melbourne in the new UM_ABP faculty building, plus a key feature, a 'must-see' facility during university open and orientation days.

The concept of 'built pedagogy' refers to the ways in which "built environments teach values through their constraints upon social action and interaction.

Common ground

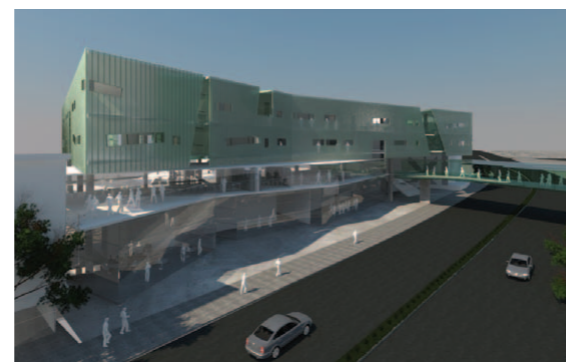
- The existing building is surrounded on all sides by remnant spaces, discrete plazas and left overs.
- Allow the faculty's new internal configuration to borrow, transform and connect with these spaces.
- Create new space that are not forecourts to buildings, but common spaces between buildings.
- Common ground creates new conversations between buildings and faculties.
- Common ground creates new ways to navigate between buildings.
- Common ground creates hybrid identities and shared expression.
- 'borrow' the lawn; bring the southern courtyard into the building to borrow Masson Road; rationalise parking to the north and borrow the Barry etc.

Double ground

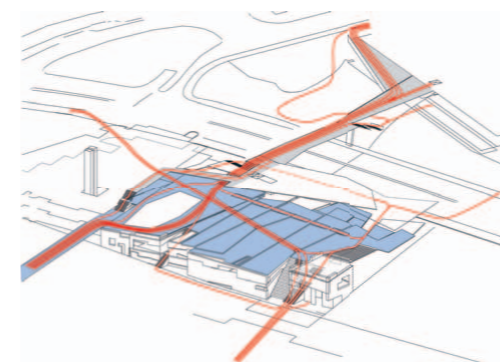
- The existing campus is the legacy of another model;
- Accretion of discrete buildings within a separate but common regulated landscape.
- Landscape is no longer separable and discreet from the building.
- Landscape is no longer confined to the ground plane.
- Landscape can become the vertical surface, the roof and the skin of buildings.
- Double Ground transforms the campus model from a building within a public field to building as a public field.

"The new faculty building must be a place where students also learn to live: the intersection of learning and socializing as well as recreation and relationships."

Peter Davidson (**LAB**)



University of Sydney: Central Building



University of Sydney: Campus Connections Diagram



SOHO Shangdu, Beijing



2.0 ACADEMIC ENVIRONMENT

NEW LEARNING SPACES

The spatial organisation of universities is changing rapidly, moving from traditional campuses that segregated teaching, learning, research and working to campuses where any of these activities can happen in (almost) any place. Traditional categories of space are becoming less meaningful as space becomes less specialised, boundaries blur, and operating hours extend toward 24-7.

Space types designed primarily around patterns of human interaction rather than specific needs of particular departments, disciplines or technologies. New space models focus on enhancing quality of life as much as on supporting the learning experience.

CHANGE IN TEACHING APPROACHES

New models of learning are driving the need for new learning environments, as students, teachers and educational institutions look for better ways of achieving their educational and learning goals. Building on conventional ways of teaching and learning, two key new ways of learning are:

Hybrid (Blended) Learning

- Multi-media, multi-location learning experiences
- Meets the needs of diverse student populations
- Learning occurs formally, informally, as part of a group or solo
- Teaching occurs face-to-face, online, and electronically, using CD-ROMs, videos, classrooms, online chat-rooms and common rooms
- The nature of the spaces in which learning occurs becomes increasingly diverse, and with advances in technology, learning spaces can be anywhere and everywhere.

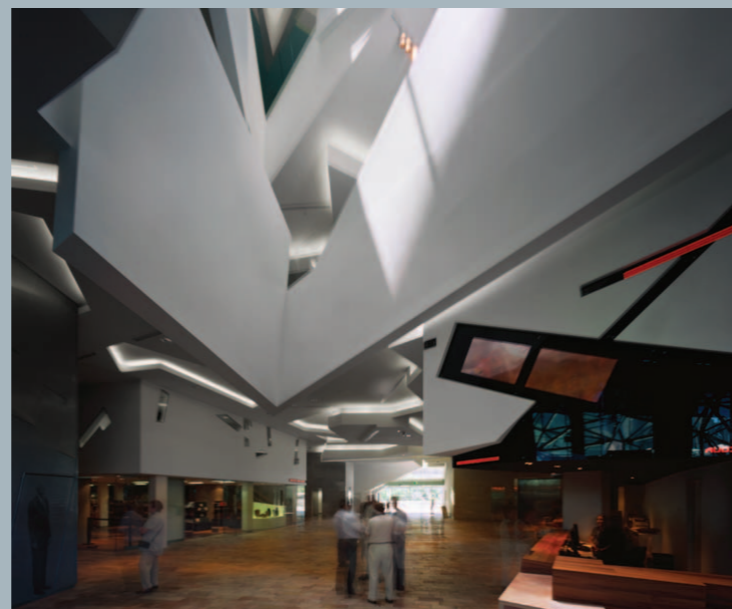
Self Directed Learning

- Students take control of their individual learning needs and are empowered to use a variety of tools and settings to achieve the learning result
- Students have a high degree of autonomy and motivation to achieve the required result
- Institutions provide a range of resources and settings to satisfy the needs and requirements of the students
- Teachers or leaders roles are to pose questions and problems, and then assist students to develop solutions or outcomes
- Like with hybrid learning, the spatial needs of self directed learning are diversifying, and learning is occurring across a variety of space and times.

UNDERSTANDING THE MELBOURNE MODEL

The teaching and learning of Architecture, Building, Property, Planning and Design at the University of Melbourne has consistently demonstrated the evolving nature of the student's experience throughout the year by year progression through their studies. This change in experience/emphasis from early years to later years was emphasised by the creation of the general Bachelor of Planning and Design course for the first three years as an amalgamation of the early Architecture, Building, Planning and Property courses, prior to the relevant specialisation Bachelors Degrees.

This approach could be seen as a natural ancestor of the Melbourne Model, and the Architecture Building and Planning Faculty became a test-bed faculty for the transition to the Melbourne Model across the University in its entirety. The implications for the student experience of cohort-based learning are an emphasised experience of generalism vs specialisation, and integrated vs collaborative professions.



Ian Potter NGV Foyer



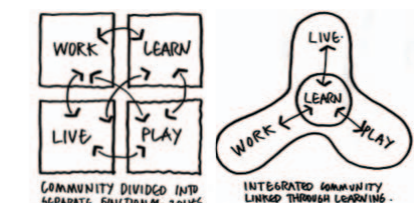
Museum of Bristol, UK



Atrium Corridor



ACMI Cinema



"The students of today are trying to balance increasingly complex lives because they are having to work to finance their education and to blend that with all other activities they want to engage in during their time at university - working, living and learning all mixed up together."

Andrew Harrison (DEGW) 'Working to learn,

"....'informal learning spaces', the interaction spaces, the bits in between that are becoming a more important part of the overall learning experience."

Andrew Harrison (DEGW) 'Working to learn, learning to work'

"opening up the possibility to Union Lawn allows the extension of a public forum ,for exchange and engagement, to be drawn both horizontally and vertically into the building"

Peter Davidson (LAB)

INTEGRATED NETWORK

As opposed to the segregated organisation of traditional university faculties, our guiding initial image for the possibilities of the new building's organization suggests a spatial cluster or integrated network: a co-operative and adaptive web of relationships as opposed to a singular focal centre or even a multi-nodal system.



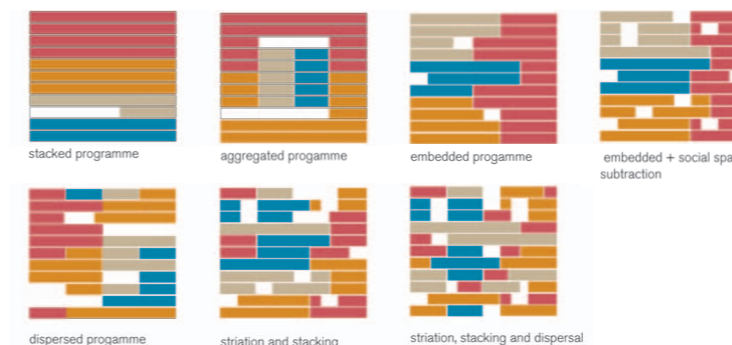
BMW Complex, Liepzig

Interdisciplinary Transformation

INTER-DISCIPLINARY STRUCTURE

Establishing the characteristics of the organisation's possibilities involves a specific engagement with UM_ABP's particular disciplinary requirements and operations, and literally building a matrix of flexibility between them.

These studies for LAB's proposal for the Cooper Union's new architecture and engineering building explore the potential for taking the distinct and separately briefed disciplines, and re-organising them into a series of organisational and conceptual options which explores the potential for optimisation of faculty facilities and the spatial implications of a more inter-disciplinary structure.



Cooper Union: Program Distribution Diagrams

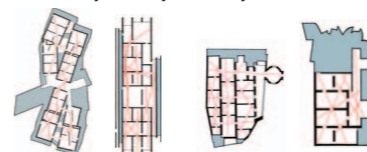
UNDERSTANDING THE TYPE

Flexibility and adaptability are fast becoming the new drivers for universities, with a growing need to balance structured teaching spaces with informal space for ad-hoc interaction and collaboration: the 'space between'. Thinking through and testing the options and implications of different configurations is an important and inescapably visual assessment process.

Part of our approach, and a fundamental of teaching practice, is to study the type: using the creative and structured analysis of existing buildings to generate knowledge and understanding of how other university faculties and architects have addresses similar challenges.



Newcastle Region Art Gallery: Gallery Flexibility Studies



NGVA: Typological Studies of Galleries

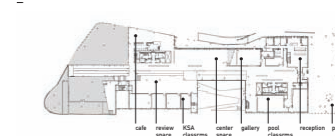
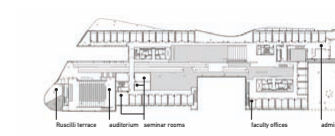
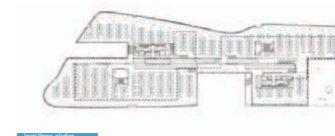
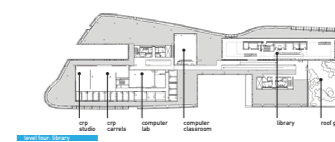
NEW FACILITIES

The amenity of the new building for all levels of staff and researchers should reflect the current standards for contemporary office buildings, and whilst acknowledging the primacy and need for individual offices it should also include for collective work areas, new types of communal and social areas to allow more informal staff meetings and discussions. The expected facilities for staff includes simple amenity such as bike racks, showers and change rooms.

Libraries are no longer merely places of function: for storing, lending, and checking, but rather places of free and shared exploration and learning via all media. They are spaces in which new forms of learning get tested and applied and become a focal campus social hub for the learning experience.

The integration of a learning commons within the library and its consequential catalytic effect as an important social hub creates a possible connection of the library with food + beverage facilities.

Buildings links within the city where it shares and contributes to the cultural life of the professional and broader community, while offering a critical examination of its intertwining histories. This is becoming an increasingly important role adopted for many faculty exhibition spaces.



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Ohio State University

Scoggins Elam Architects

3.0 THE DESIGN STUDIO

PRIMACY OF THE STUDIO

The studio is rightly seen as the key setting for student learning, the place where work is generated, reviewed, displayed and stored and of immersion in professional culture. However there has been a considerable change in the role of the design studio brought about by changing student approaches to the studio, as well as the potential to increase its space utilisation.

In teaching institutions, the resource-hungry nature of both studio teaching methods (namely one-to-one tutorials and group reviews or 'crits') and the quantity of space required, their changing patterns of use and increasing demands for space with higher student numbers has focused attention on how best to evaluate the ongoing academic effectiveness and efficiency of facilities.

The ongoing and changing nature of studio-based education, and the role space design plays in reinforcing and redefining the studio as the key learning setting requires exploring the challenges faced by both the users and providers of studio space and understanding how the drivers of change effect planning, configuration and amenity.

OBSERVATIONS

There are a number of key factors leading to changes in the way students are learning and studying, plus altering their expectations and engagement:

- role of technology + resources in changing studio working patterns and space requirements
- requirements for formal and informal teaching and learning spaces
- variety and changing dynamics of staff-student interaction
- encouragement of interaction between students from all year levels
- students becoming more diverse in background and circumstances.

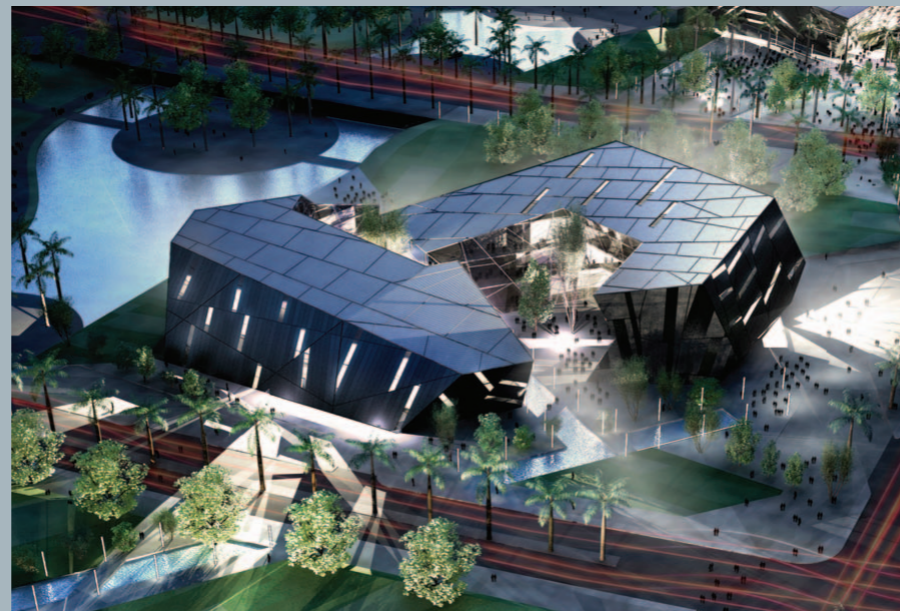
REFLECTIONS

The studio is one of the pre-eminent examples of peer to peer teaching. However the tradition of students working in the studio, learning from each other, with teaching help on hand as and when required, is being impacted by the changing use and relationship of students to the studio. Some of the issues affecting this pattern are:

- an increasing trend for students in some disciplines to work less in the studio
- increase in importance of studio and campus atmosphere as well as social companionship
- increased student expectations concerning studio facilities, furniture, storage and technology
- increasing numbers of students having access to portable or home computing
- requests for tech support are for access to specialist equipment, software and printing services.

The studio becomes both a working place and a temporary meeting place where students can catch up with their tutors and fellow students. Depending on the discipline, this can lead towards a concept of studio identity being primarily defined, not by space, but by events, reflecting a pattern of studio use shifting from live-in to drop-in, where studio identity is increasingly forged by events rather than space.

The importance of non-designated space for students to work together outside the classroom is increasingly being recognised for its educational value and contribution to creating a sense of community. Furthermore, the "space between" is both physical and virtual as learning shifts from being location-centric to location-independent. Interaction is initiated in the physical realm but thereafter can migrate to the virtual.



Shenzhen Cultural Centre



Newcastle Region Art Gallery



BMW Edge

EVOLVING STUDIO USE

Addressing the issue of studio space ownership may be the biggest challenge that studio practitioners face in their desire to creatively respond to a changing educational environment, balancing staff's need to flexibly respond to student's learning needs and students to personalise the studio for working, socialising and, most important of all, belonging.

Studios should be great places to be, with good and controllable natural light, ventilation which can adapt according to seasonal conditions to reduce reliance on mechanical systems and engaging with outdoor studio spaces which open directly onto outdoor work and recreation areas. They are places which reveal the creative and productive engagement of the design professions and artistic practice with all aspects of enquiry and speculation. Spaces that should provoke and support exchange.



Knowlton School of Architecture

TOWARDS SOLUTIONS

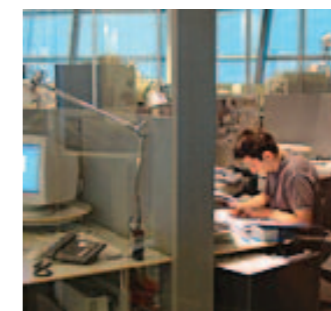
There are a number of emergent solutions in the way these changing patterns of learning are impacting on general studios, including retaining a core provision of flexible studio space, while securing flexible teaching spaces to support crits, reviews, seminars and tutorials on studio days. This can allow both a re-demarcation which encourages 'ownership' by students, independent of their unit group as well as organising studios to simultaneously support both live-in and drop-in use.

Live-in space might consist of a large first year studio (essential in forging a sense of belonging and identity) and a limited number of small, lockable studios for upper year students.

Drop-in space in contrast could comprise of a number of large, high quality, open-plan, shared-access, technology-enabled studios for temporary use, supported by facilities for storage, modelmaking and digital requirements.



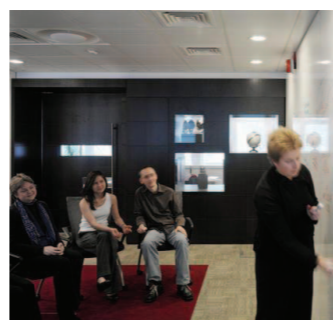
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ACMI Offices



BOX, London School of Economics: DEGW



ACMI: Digital Learning Space



For both Donald Bates and Peter Davidson, the studio remains both an important benchmark and an ongoing model for the daily operation and production of LAB, not least because the studio's original formation was within this spatial environment.

The potential of the studio was also a lesson learnt from Donald Bates' establishment in the late 1980's of the independent Laboratory of Primary Studies in Architecture (LoPSiA). Located predominately in Le Corbusier's Briey-en-Forêt Unite d'Habitation where, apart from the dining room-street, the studio was the schools' sole learning space for singular and collective work as well as seminars and discussions.

The very realisation of Federation Square was founded upon this studio structure, enabling both the office to grow from originally 5 to over 100 people in under two years, and for all aspects of the project to develop simultaneously. In simple terms the better (studio) critics we were able to be, the better the architecture became.



More than one institution has told us that "space is essentially a curriculum issue", yet we suspect that spatial opportunities rarely feature in curriculum discussions.

Fiona Duggan (DEGW)

The increasing importance of technology in all aspects of education is well recognised, along with a growing awareness that the impact of the computer is less about how it empowers individual learning, and more about how it changes the way students support each others' learning.

Fiona Duggan (DEGW)

4.0 THE LIVING BUILDING

COMMITMENT

When **LAB** designed Federation Square (12 years ago) it was an exemplar in terms of the integration of new sustainable initiatives in architectural design, confounding the way that a 'green building' was expected to or might look. Today, as many of its initiatives such as rainwater harvesting and recycling, the use of displacement air conditioning and of creatively recycled materials (timber to the NGV gallery floors and BMW edge) are now becoming common place in contemporary practice, and **LAB** continues to strive for ongoing innovation in the design of buildings and integrated service systems.

Developing and maturing technologies such as the integration of photovoltaic collectors within glazing and facade panels, the use of integrated vacuum systems for both wet and dry building wastes and new concepts for reticulation of power, and communications data lead to ongoing innovation and integration within building designs.

GREEN AND BEAUTIFUL

The change in the way we think about the design of buildings represents a significant change in design paradigm. Instead of buildings being fixed and immutable, they are now understood to potentially engage with and reproduce the logic and dynamic of natural processes and energy flows.

Buildings are now understood as 'artificial ecologies' consisting of a series of inter-related energy and resource systems, which change their mode of operation and degree of interaction and interdependency, depending upon the conditions they are mediating. In this way buildings become living environments, learning from systems of bio-mimicry to alter their operation specifically in response to changes in external environmental conditions according to the time of day or year.

In rendering this new paradigm, **LAB** engages with the challenge of finding a new and synthetic aesthetic which attempts to find a contemporary expression for what architects have always strived to create: beautiful buildings.

THINKING DIFFERENTLY

For **LAB** sustainable building design is about taking a different, and holistic approach to the building design: taking into consideration, integrated urban design, resources, the embodied energy in the material's manufacturing processes, energy consumption, passive design principles and service systems, ongoing operation costs of buildings as well as the articulation of the building form and spatial qualities for the optimisation of performance and visual qualities surface façade.

Holistic design is also the principle which is most often expressed through the triple bottom line principle, where Environmental - Economic - Social considerations are properly equated and outcomes balanced. In the instance of the UM_ABP project and recent world events, this might be better extended and expressed as an aggregative pentuple bottom line integrating (ethics and governance within) a broader understanding of culture as well as increasingly important capacity for change.

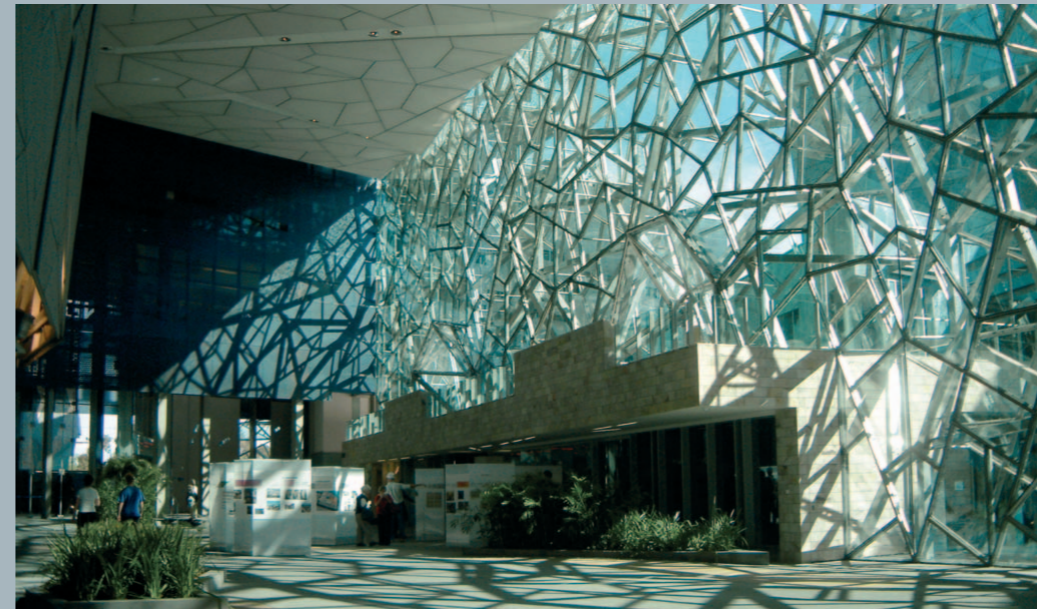
PRINCIPLES

The key approaches for **LAB** in the practice of sustainable design involve the following principles and exemplary practices becoming part of the process of a building's design, not something added later to improve performance.

- Engage passive building design
- Energy (and carbon) reduction
- Resources conservation
- Capacity for change



Labyrinth



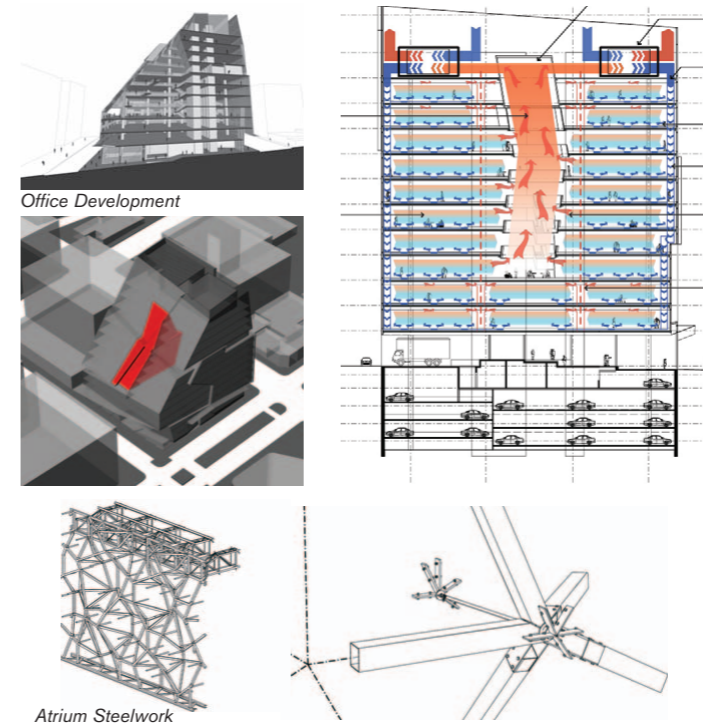
The Atrium

INTEGRATED DESIGN

Integrated design is an holistic approach where the project's functional programme, site constraints, structure, environmental services and spatial organisation are conceived and developed in an integral and co-ordinated way, utilising the skills of all project team members.

This process is enhanced by the contemporary use of building information modelling (BIM) which allows the team to develop a single and integrated 3D intelligent project model. One of the significant areas where this approach is in the building envelope, where commencing with environmental analysis, the model can be used to progressively define and develop the buildings facade systems with a targeted and optimised performance and visual outcome.

Federation Square was developed and documented as a 3D model, where both structure and services were modelled to ensure they were fully co-ordinated with the building's façade. This process extended to using this model as the basis for the detailed development of fabricator's shop drawings, as well as providing the successful acoustic outcome for the BMW edge. The 'architectural' model was imported inside an acoustic programme, which resulted in the spaces intuitive 'tuning' of glass panels of the inner surface being folded into the structural frame's geometry to create the requisite reflective angles to 'mix' the sound.

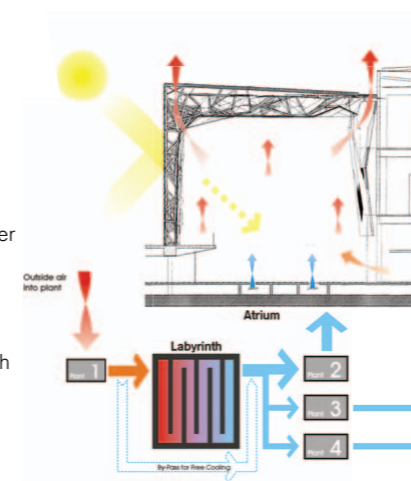


CASE STUDY: THE LABYRINTH

The Labyrinth is a thermal mass battery for the storing primarily of 'coolth' in summer, but also of warmth in cooler months. By passing cooler air through the labyrinth at night, the precast, zig-zag surfaced concrete walls are charged up ready to be deployed by day, by cooling the daytime air passing through it.

On a typical 35°C Melbourne summer day, a 12°C reduction in temperature is achieved using only one tenth of the energy required for air conditioning to the same standard. The Labyrinth's efficiency allows it to also be used as a pre-chill source for the ACMI cinemas, whilst in winter it operates in a reverse mode, never falling below a temperature of 14-15°C. Its 3 year payback means it delivers considerable ongoing operational and maintenance savings.

Air is supplied at low velocity to the Atrium through floor level timber grilles, and the overall air flow through the space and roof level exhaust is enhanced through the use of a solar chimney effect with the Atrium facade which helps 'drive' this flow.



Federation Square: Labyrinth



Passive design is anything but; it is initiated with a response to specific local climatic conditions and developing natural lighting and environmental systems which help respond to these. Biomimicry...

Even with proper incentives, it is not easy to apply (these) new ideas about saving resources. Achieving big savings more cheaply than small savings requires leap-frogging, not incrementalism; having the frog get smarter but just sit there in the same old pond isn't good enough.

from Factor Four : Doubling Wealth, Halving Resource Use
von Weizsäcker, Lovins and Lovins 1997



Porous ground

- The lower levels of Campus buildings are inevitably fractured and punctured with public uses, common programs and rights of way.
- The design of campus buildings tolerates this without explicitly acknowledging it.
- Listening to the lessons of blonde brick take the existing language of MU's public realm and turn it inward on the building.
- Make the building porous. Make the porous public. Describe it using the language of the campus' public realm;
- The new building therefore expands the public realm rather than being seen to build over it.
- Nolli's Rome + Blonde Brick and juniper bushes = The Melbourne Model

5.0 CAPABILITY + PROCESS

INTEGRATED DESIGN

LAB architecture studio is a specialist international architecture and urban design firm whose reputation is founded on proposals for buildings of distinctive form and façade treatment, complimenting internal organisations which engage with contemporary needs for spatial and organisational flexibility. The studio's experience in the design and realisation of Federation Square in Melbourne, Australia, and the subsequent range of institutional and commercial projects it has undertaken, has placed it at the forefront of current practice in developing new possibilities for cultural and learning institutions. This experience allows us to lead this formidable design team.

DEGW is an international strategic design consultancy focused on the changing nature of work and learning, new supporting technologies and their impact on the design and use of buildings. They work with organisations and institutions committed to creating better learning experiences for the people they serve. In assisting them to prepare for the future while addressing their needs of today, **DEGW** strives to create innovative learning landscapes that support educational + organisational change.

ARUP and **LAB** have a strong and long standing collaborative association which forms the basis of a unique and integrated design approach that embraces the inherent complexity in building and construction to achieve innovative and successful project outcomes. **ARUP** is actively engaged with the planning and delivery of education facilities across the globe. Our extensive education experience includes all types of facilities such as secondary and university buildings, class rooms, lecture theatres, laboratories, and auditoria; and ranges from new build through to the modernisation of existing buildings.

This breadth of experience of the three companies; in understanding and proposing new organisational arrangements for learning spaces and giving them spatial and architectural expression with attendant environmental quality, establishes a mutually respectful relationship which harnesses each company's complimentary skills, abilities and specialist knowledge. This we believe is the collaborative foundation for the MU_ABP project.

TEAM STRUCTURE

The team structure being proposed by **LAB** with **DEGW + ARUP** goes far beyond the conventional grouping of consultants and sub-consultants. In the first instance, what is being proposed is the formation of a "Project Office", which allows for the focused and dedicated staffing of a broad mix of consultants and sub-consultants, across many disciplines, but working side-by-side from the very earliest stages of the project. This model of development and production was undertaken by **LAB** on the Federation Square project and was a major factor in not only the successful completion of that project, but in the creation of a unique architectural work.

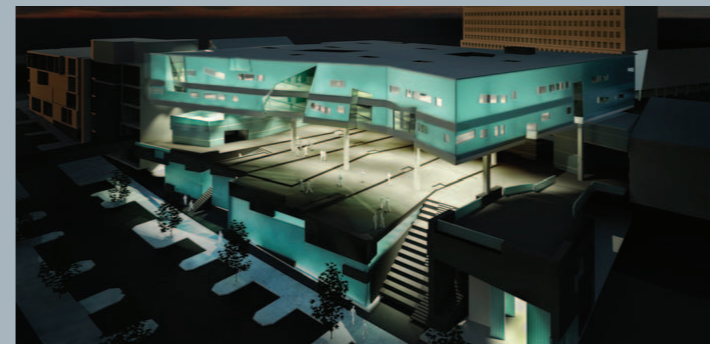
For the MU_ABP design competition, our principle design team of **LAB** with **DEGW + ARUP** is supported through the involvement of: **Oculus** for integrated landscape environments; **Lovell Chen** for considered attitude and design advice regarding heritage significance; and **Davis Langdon** who will provide a framework for running 'value for money' assessment.

PROVOCATEURS

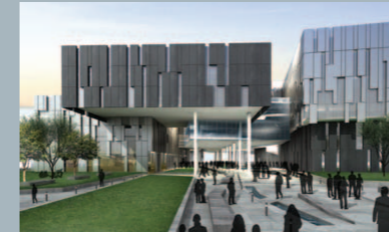
Paul Morrell and William Lim will act as external critics to both the design process and to the issues of the workplace, the institution and the task of producing quality architecture. Both will be involved in workshops and structured reviews as the design progress – both at the competition stage and subsequently. Jeff Kipnis and Patrick Bellew will also act as critics and external protagonists, but will in fact be part of the design team. Jeff Kipnis will perform this role as part of a on-going conceptual and theoretical review of the development of the project, while also undertaking specific design research into architectural pedagogy and education. Patrick Bellew will assist as both a critic and as part of the environmental design component of the team.



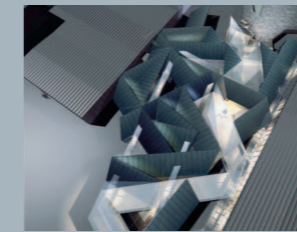
Square of the Rose Revolution



University of Sydney, Central Building



Nanjing University Library



BMW Complex, Liepzig

PROCESS

Universities are about resolving ambiguity. Learning resolves ambiguity about a previously unknown subject matter. Research resolves ambiguity about a particular field of study.

We see the process of design as similarly about resolving ambiguity. Design is a process of unfolding possibilities that address the needs and aspirations of occupants, as well as responding to the site and project constraints. (perhaps nominate reference)

This process of unfolding the design is not linear, rather it is a process of recursive iteration involving multiple stakeholders that include staff, students, and the general population. At each unfolding the existing design becomes once more ambiguous, requiring new understandings to be constructed and shared. This recurring ambiguity is the central concept of our process of engagement with the Faculty.

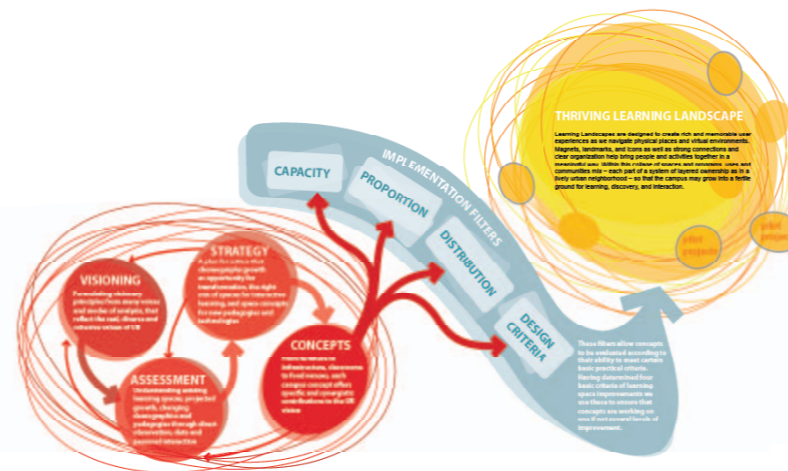
Our design process presumes that our initial design that won the competition becomes once more ambiguous as we engage with stakeholders. And that as each stakeholder group resolves this ambiguity the design evolves and unfolds.

METHODOLOGY

We propose that in this process the competition proposal will form a visualised reverse brief. This will become the basis for a series of 'symposia events' where fresh eyes will be invited to review the initial design proposal and subsequent key stages of the development's ongoing design evolution.

For each of the 'symposia events' we propose the inclusion of the 4, highly-qualified "provocateurs". These individuals each manifest singular talents that will provoke, critique, question, prod and facilitate the development of an original contribution to the University of Melbourne campus, one equal to or surpassing the challenge of the future direction of architectural education.

Each 'symposia event' will be constituted of public lectures and workshops involving the provocateurs, the design team and key stakeholders. **DEGW** will then employ their highly developed and effective suite of engagement tools (see table across) to capture and clarify, the discussions and ideas germinating from the 'symposia events' as input for further investigations for the design team.



Interviews:
A program of interviews with key stakeholders can be used to explore issues related to the strategic objectives of the organisation, the nature of teaching, learning and research and how this may change over time, the opportunities and challenges associated with creating new accommodation and the appropriate measures of success for the project.

Envisioning Workshops:
Workshops with staff and or students help to explore high level aspirations, drivers of change, desired image and branding and the success criteria for a project. Workshops would be designed to engage users by fostering creative and constructive dialogue amongst participants in a collaborative setting.

Focus Groups:
Specific focus groups can be convened to understand Division-specific issues relating to space, technology, pedagogy etc. and enable end-users to provide input and have ownership of the final outcome. Workshops help to gauge the appetite for change and facilitate the creation of design concepts that are aligned with user requirements.

Online Survey:
This online research tool gives an understanding of staff and student perceptions of their learning environment. The survey measures the performance of current facilities; identifies critical issues that need to be addressed; provides benchmarking information for Post Occupancy Evaluation. Most importantly the survey provides a forum for people to participate in the project and communicate their aspirations and or concerns.

Ethnographic Research:
Ethnographic research provides a 'user-centred' perspective of the many complex variables within an organisation. It provides first-hand information about how staff and students work and learn, what spaces they use for different tasks, how they move between tasks and how space itself might be informing the way that staff and students interact.

REFERENCES

LAB

Frances Lindsay - National Gallery Victoria,
Deputy Director (2000-)
frances.lindsay@ngv.vic.gov.au

DEGW

Mr Trevor Gerdsen -
Director, Infrastructure Services
University of Newcastle
Telephone: (02) 4921 8994

ARUP

Mr Patrick Stewert -
General Manager-School Resources
Office of Resources + Infrastructure,
Melbourne
Telephone: (03) 9637 3051

REGISTRATION

LAB architecture studio

ARBV: 50560

Donald Bates ARBV: 15191

Peter Davidson ARBV: 15192

Primary Design Team

LAB architecture studio	Team Leader Architecture, Urban Design + Interiors
DEGW	Facility Planning + Support
ARUP	Integrated Structure + Services

Provocateurs

Jeffrey Kipnis USA	Architecture, Pedagogical Research
William Lim Singapore	Architecture
Paul Morrell UK	Value, Constructability Frameworks + Procurement
Patrick Bellew UK	Environmental Engineering

Design Consultants

Oculus	Landscape Architecture
Lovell Chen	Heritage
Davis Langdon	Quantity Surveyor + Building Surveyor
Tomato	Media + Communications
David Crampton	Signage
Blythe Sanderson	DDA + OHS
MEL Consulting	Wind Engineering



6.0 ARCHITECTURAL MERIT

www.labarchitecture.com

INTERNATIONAL AWARDS

- MIPIM AR Future Project Awards (2008) - Commended
- FX International Interior Design Awards; London (2003) - Best Museum
- Cityscape Architectural Review Awards; Dubai (2003) - Urban Design
- Cityscape Architectural Review Awards; Dubai (2007) - shortlist
- Kenneth Brown Award; Hawaii (2003) - Commendation for Asia Pacific
- Urban Land Institute Award for Excellence: Asia Pacific; (2005) Best Public Project
- Chicago Athenaeum International Architecture Awards; USA (2006)

NATIONAL AWARDS

- (R)AIA National Awards (2007) - International Architecture
- (R)AIA National Awards (2003) - Interior Architecture Award
- (R)AIA National Awards (2003) - Walter Burley Griffin Award for Urban Design
- (R)AIA Victorian Awards (2003) - Victorian Architecture Medal
- (R)AIA Victorian Awards (2003) - Marion Mahoney Award for Interior Architecture
- (R)AIA Victorian Awards (2003) - Melbourne Prize
- (R)AIA Victorian Awards (2003) - Joseph Reed Award for Urban Design
- (R)AIA Victorian Awards (2003) - Institutional Architecture Award
- Australian Institute of Landscape Architecture (2003) - Design Excellence
- Dulux Interior Colour Award (2003) - Public Spaces
- Public Domain Award (2003) - for Sustainability
- Melbourne Design Prize (2004)
- Interior Design Awards (2004) - Interior Design Award Award for Excellence and Innovation
- Interior Design Awards (2004) - Public/Institutional Interior Design
- Property Council of Australia; Victorian Division; Australia (2005)

BOOKS FEATURING LAB

- New Public Spaces; Gaventa, Sarah. Mitchell Beazley Publishing, London, 2006 pp, 24-27. cover
- Beijing - The New City; Greco, Claudio; Santoro, Carlo. Skira, Italy, 2008 pp, 188-189
- The New Paradigm in Architecture; Jencks, Charles. Yale University Press, London pp. 262, Inside Cover, Back cover
- Architects Today; Rattenbury, Kester. Lawrence King, London, 2004 pp.128-129
- Contemporary Architecture; Slessor, Catherine. Images Publishing, Australia, 2004 pp. 140-145
- 10 x 10; Spiller, Neil. (ed. Constantinopoulos, Vivian). Phaidon Press, London: , 2000. pp. 216-219.

LAB PUBLICATIONS

- Architectural Design; Integrating Architecture. Bates, Donald L. and Davidson, Peter. Academy Group, London: . (1996). pp. 66-71.
- Architectural Design; After Geometry. editors - Bates, Donald L. and Davidson, Peter. Academy Group, London: . (1996).
- Assemblage 41., Bates, Donald, L. (04,2000). MIT Press, Cambridge, Mass. pp. 38
- Assemblage 29., Bates, Donald L. and Davidson, Peter. (04/1996). MIT Press, Cambridge, Mass. pp. 102-115.



"placed in a larger perspective, we can see this city fabric as a step in a sequence, in the development of an urban order that is neither classical nor modern but, like the geometry of nature, based on ever-changing and slightly varying fractal patterns, an order much more amusing and interesting than those overly repetitive ones of the past."

- charles jencks, "wacky or wise?" architectural record, [new york: 2003], p. 119

an untiring passion for detail drove this remarkable project. its expansive and intricate spaces consist of many precise and beautiful parts. a piece of architecture that celebrates rigour and resolution at all levels, it is inherently heroic without lapsing into mere gesture."

- julie dillon, "attention to detail" artichoke [melbourne: march 2003] p. 60

Clearly the design of Federation Square has been conceived by LAB with an intelligent and sensitive awareness to the ways in which people move around cities and other urban settings ... In designing Federation Square LAB have thus distilled the essence of Melbourne which they have studied extensively, with a sophisticated understanding of how overall functional planning and good spatial organisation make public environments successful.

*Frances Lindsay
Deputy Director
National Gallery of Victoria*

I take pleasure in recommending that LAB would make an exceptional addition to any project who requires a dedicated, detailed and cost focused architectural practice.

*Tony Cosma
Project Manager
Multiplex*

"it is the very complexity of the brief, the site and the solution that invites open-jawed admiration"

- robert bevan world architecture no.112 [london: 01/2003] p. 34