20 September 2017

CLEARANCE 2.7 m

Reshaping projects with a game-changing delivery model

La Irobe University Eastern Campus Redevelopment – Stage 3

La Tro Business Scho



Contents

Project Overview

- Context for the University
- Why fast track?
- What choices of delivery model were there?
- How governance and approvals were addressed

Challenges and Opportunities

The Completed Project

Lessons Learned

Q and A



Project Context



Project Landscaping Zone



Existing Building to be Refurbished

Building Response

- Building depth
- Connections and transparency
- Welcome
- Teaching floors



Business School Objectives Teaching & Learning Agenda

- Preparing students for the jobs of the future
- Group work, collaboration, and 'design thinking' focus
- Higher quality interactions with teaching staff
 EBLs favoured over lecture model
- Connections to industry



Research & Innovation

- Four embedded research hubs within the academic workplace
- Immersive technology
- Industry connections promoted
 - Alumni
 - Event space
 - Visible teaching and learning practice





Workplace

- Reinforce a collaborative research culture
- Collocation not silos of HDRs
- <u>Understand</u> the activities of academics
- Collaboration versus Confidentiality / security
- Supportive spaces Video production / Editing / Skyping / workshopping







Bombshell #1

While Hayball were designing... Infrastructure & Operations was preparing the ground

Background: LTU as risk-averse organisation

Delivery model being designed.

Design team included:

- Ernst & Young
- Baker McKenzie
- Wilde & Woollard
- Root Projects
- LTU Chancellery, Legal, Finance, I&O

While Hayball were designing... Infrastructure & Operations was preparing the ground

Delivery Model Objectives

- Achieve program objectives
- Control financial risk
- Maintain design control
- Palatable to the University's governance committees

Time is of the Essence 1. Traditional Fully Documented Lump Sum

- Provides greatest cost certainty relative to known project scope
- Greatest opportunity for consultation
 & collaboration with stakeholders
- Maximizes likelihood of good construction quality
- Relatively inflexible
- Slow



Time is of the Essence 2. Managing Contractor / Constr. Management

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Potential to shorten program Risk Allows contractor input into design phase More flexible than FDLS Reduced opportunity for consultation Responsivenes S Uncertain final cost until all packages let Principal accepts commercial risk (unless with GMP)



Time is of the Essence 3. Document & Construct

- Opportunity for some concurrent Documentation and Construction
- Requires completed SD stage documentation to define scope
- Potential to accelerate build program
- Loss of control over design & build quality
- Transfers commercial risk to contractor
- More flexible than FDLS



Time is of the Essence 4. Framework Agreement Leading Into DLLS

(Lump Sum Tender based on Provisional Trade Budgets)

- Predicated on allowing concurrent
 Design & Construction
- Maximizes contractor buildability input
- Requires only early SD stage documentation and trade package budgets to define scope
- Compromises consultation in favour of program
- Highly flexible
- Progressive risk transfer from Principal to Contractor



Relative Merits of Approaches



- Eight tier 2 contractors approached for EOIs
- The EOI Documents described a relationship between the University and two contractors which would jointly deliver the University's accelerated capital program scope

Four of eight then selected to tender to:

- Enter into an exclusive Framework Agreement with University as "one of two" for any project executed within the "Fast Track" program of works
- Agree to provide Early Contractor Involvement stage services for a fixed and firm fee determined by the University
- Commit to fixed percentage for off-site prelims & profit and fixed tendered margin for on-site prelims

Selection based on team, financials, capability and perceived culture

Why TWO Contractors?

With total anticipated scope of Accelerated Works approximated \$200M over 4-5 major project

- More than 2 contractors may diminish the proportional attractiveness to a tier two builder we want LTU to be significant
- Less than two contractors is a one horse race we want to retain some competitive tension.

University would assign projects to one of two based on:

- Equitable spread
- Contractors' current LTU work in hand
- Contractors' performance to date

Once appointed, contractor would:

- Undertake ECI Phase with University & Design Team
- Enter into a modified AS4000 which provides for progressive tendering of Trade Packages
- Tender packages transparently with PM, QS & LTU input.
- Be entitled to incentive payment for aggregate savings against budget

Program

Ŭ	2015							2016													2017			
Activity	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar		
INFRASTRUCTURE TEAM																								
Model Design							1	1											1	1				
Model Documentation																								
Approval							- 1	1																
Tender																			1	1				
DESIGN TEAM							1	0											1	1				
Briefing & Feasibilities							/	1																
Schematic Design																								
Design Development	· · ·							2					∮ Fu	ll Con Issu	e									
Package Documentation								2 🗖																
BUILDER 2							1	0											- 1	7				
Procurement							2	2					Ť						2	Date for	PC	● PC		
Site Possession & Construction																			- /)				
Investigative Work																								
BUILDER 1							1	1											1	1				
Demolition & Early Works							1	1												1				
CLIENT							1	1											1	1				
Occupancy							2	2											2	1				
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Agreement

DLLS (Deferred Let Lump Sum Agreement)

Challenges and Opportunities

- Changing design brief
- Disjointed procurement
- Managing parallel activities
- Financial risks abortive work
- Gaining appropriate construction intelligence



Bombshell #2

Program

0	2015							2016												2017		
Activity	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
INFRASTRUCTURE TEAM																						
Model Design							1	1											1	1		
Model Documentation								2											2			
Approval							- (1			
Tender								3											1	1		
DESIGN TEAM							1	5											1	1		
Briefing & Feasibilities							- /	1														
Schematic Design							17															
Design Development							-10						∮ Fu	ll Con Issu	e				1	2		
Package Documentation							1															
BUILDER 2							1												1	1		
Procurement									Í										2	Date for	PC	● PC
Site Possession & Construction							1	1											1	2		
Investigative Work							- 12															
BUILDER 1							1	2											1	1		
Demolition & Early Works							-1/	1												2		
CLIENT							17	1											1	1		
Occupancy							10	2											2	3		
							Fac Deci	ade < sion	Fran Agre	nework eement	*			DI	LS (Defer	rred Let l	ump Sur	n Agreem	ent)			8

Occupancy

Facade Decision

Original Approved Design



Brickwork Removed



New Façade Options







Revised Design









Level 3 Staff Lounge

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Lessons Learned



- Model was effective and performed as hoped
- Reduced time for consultation was a problem constantly playing communications catch-up
- Reliant on collaborative relationship w. Builder
- Impost of internal governance was greater than expected
- Very high maintenance for team huge housekeeping overhead
- Although not specifically planned to manage latent conditions / scope change, it worked well
- Universities do struggle with going fast



- Non adversarial builder model brings huge benefits to 'designing on the run'
- Delivered big time savings
- Was more intensive for longer
- Overlap of work stages– clear communication required
- Suits less 'integrated' design solutions
- Risk that later packages may suffer losses of scope or finish
- ECI phase earlier better

Questions

