



CCG Christchurch Event

31st July 2024

Theme:

Does Value Engineering provide us with good value for our money?

Agenda

Host: RCP Christchurch
Venue: Christchurch City Library Tūranga
60 Cathedral Square
Central Christchurch, Christchurch 8011

31/07/2024

3:00 PM **Sign In, Networking and Light Afternoon Tea**

3:15 PM **Welcome and Introduction**

Alan Palmer
Co-chair | Christchurch Regional Chapter

3:20 PM **Host Welcome**

Host introduction from Andrew from RCP
Christchurch office

Andrew King
Senior Project Manager
RCP

3:30 PM **Positive Value Engineering**

Value Management and Value Engineering (as
distinct from cost cutting) can be proactively
implemented by project teams in positive ways,
and earlier and more tactically than usual

Lawrie Saegers
Managing Director
Rawlinsons

3:50 PM **Traditional verses technology**

Disrupting the traditional value engineering
process with technology

Tom Chatterton
Director
RLB

4:10 PM **Case Studies**

On the application of Value Engineering and
Value Management – a multi-disciplinary
approach

Sam Twyman
Civil Portfolio Manager
Summerset

4:30 PM **Panel Discussion**

Our speakers are invited to join a panel discussion
where the audience can ask questions, led by
Francois Baudet

Francois Baudet
Member | Christchurch Regional Chapter

4:50 PM **Wrap up & CCG 2024 Programme**

Alan Palmer
Co-chair | Christchurch Regional Chapter

5:00 PM **Close**



Alan Palmer

CCG Regional Chapter
Christchurch Co-chair

Welcome and Introductions




**Construction
Clients' Group**
CONSTRUCTING EXCELLENCE



Andrew King
Senior Project Manager

Host Introduction





Construction Clients Group
Christchurch – 31 July 2024



- Our Beginnings

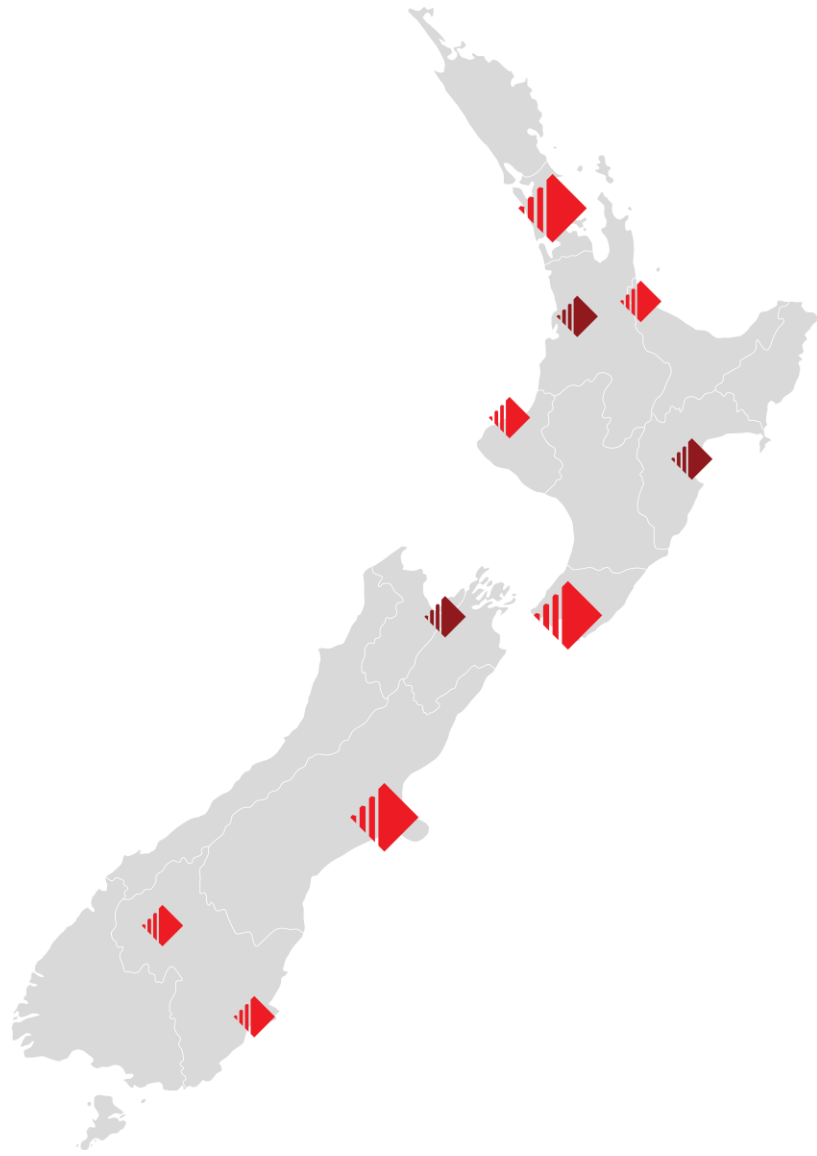
- In 1994, founding partners of RCP, Wren Warfield and Nick Beale, teamed up to help deliver the Sky City Entertainment complex and Sky Tower to an ultra-demanding delivery programme.
- Recognising an opportunity to leverage the knowledge gained from these major projects, RCP was born to serve the New Zealand property and construction market.





- Growth Through Recovery
- Our involvement in the Canterbury Rebuild shows RCP's ability to shape organise and deliver places which thrive.





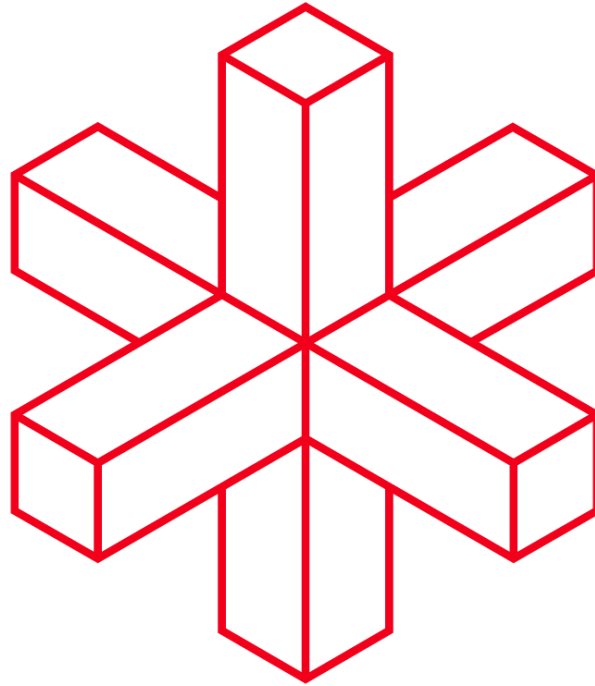


Does value engineering provide us with good value for money?



Value Engineering and Generating Value

Time
Cost
Quality
Health and safety
Risk
Form
Function
Communication
Relationships



Value

Thank you



Lawrie Saegers
Managing Director

Guest Speaker

RAWLINSONS

Positive Value Engineering

RAWLINSONS

31 JULY 2024 | PRESENTATION FOR CONSTRUCTION CLIENTS' GROUP



Lawrie Saegers

Managing Director
of Rawlinsons

- 1. Defining and Delivering Value**
- 2. Value Management and Value Engineering**
- 3. Common Negative Perceptions (+ Positive Changes)**
- 4. Adding Value for our Clients**

Defining Value

- Before engaging us, clients usually know *what* they want (classroom, office, warehouse, road, etc)
- All clients want to maximise value and minimise risk
- But... the vision of a project varies widely
- Therefore it is up to us to help shape and define what value means to deliver it



Defining value: Key variables & influences



Speed of Delivery

- Critical milestones?
- High time value (e.g. process, production)
- “Flattening the curve”



Design and Quality Control

- Define requirements, incl sustainability
- Control or transfer design
- Independent verification?



Cost Certainty

- Outset vs out-turn
- Approved budget envelope
- Funder requirements



Flexibility for Change

- Future proofing
- Change of use
- “Fluid” end use requirements



Risk Appetite

- Conservative, moderate, radical
- Risk allocation based on above
- What is the client’s business?

Delivering Value



Procurement Strategy

- Design by client or contractor?
- Time and/or cost critical?
- Client's risk appetite?



Early Contractor Involvement

- What is the specific value add?
- Can “bolt on” to any approach
- **Access to supply chain?**



Form of Contract

- Usually 3910/3916
- Are conditions fair and equitable?
- **Will the supply chain accept?**



Macro-level Influences

- World Container Index
- Crude Oil Price
- Domestic logistics



Market Conditions

- Capacity (timing, workload)
- Capability (can we execute?)
- Time (programme durations)



Market Intelligence

- Local and national trends
- Benchmarking
- Escalation, Contingency, QRA etc

Value Management + Value Engineering

Value Management

Proactive, conceptual, tactical

Considered in early stages

Should inform commercial and procurement approaches

Should consider market conditions

Value Engineering

Reactive, specific, technical

Considered during design and construction

Similar, but more “localised” for discrete works packages

Similar, market conditions likely to change during design



VE - Common Negative Perceptions

- **A reactive process**
- **We're just cutting costs**
- **The QS's budget is wrong**
- **It's all about managing cost**
- **VE will deliver value in isolation**

VE - Positive Changes

~~✗ **A reactive process**~~

✓ **A proactive process**

~~✗ **We're just cutting costs**~~

✓ **Delivering value (as defined)
cost effectively**

~~✗ **The QS's budget is wrong**~~

✓ **Possible, but review scope &
spec vs requirements**

~~✗ **It's all about managing cost**~~

✓ **+ managing carbon, sustainability
(e.g. GreenStar)**

~~✗ **VE will deliver value in isolation**~~

✓ **VM & VE together will deliver value**

Adding Value for our Clients



Define value

- Understand the project vision
- Who are they as a business
- Define requirements clearly (why, what, where)



Deliver value

- Anchored to value definition
- How (procurement), who (market) and by when
- Project culture



Market intelligence

- Macro-level influences
- Local and national trends
- Cost, risk and value management



Other considerations

- Carbon management (embodied & operational)
- Sustainability ratings
- Better use of available technology



Tom Chatterton
Director

Guest Speaker



CONSTRUCTION CLIENT'S GROUP

Disrupting Traditional Value
Engineering Processes with
Technology



TRADITIONAL VALUE ENGINEERING



- Noting value is more holistic
- Not considering expectation management

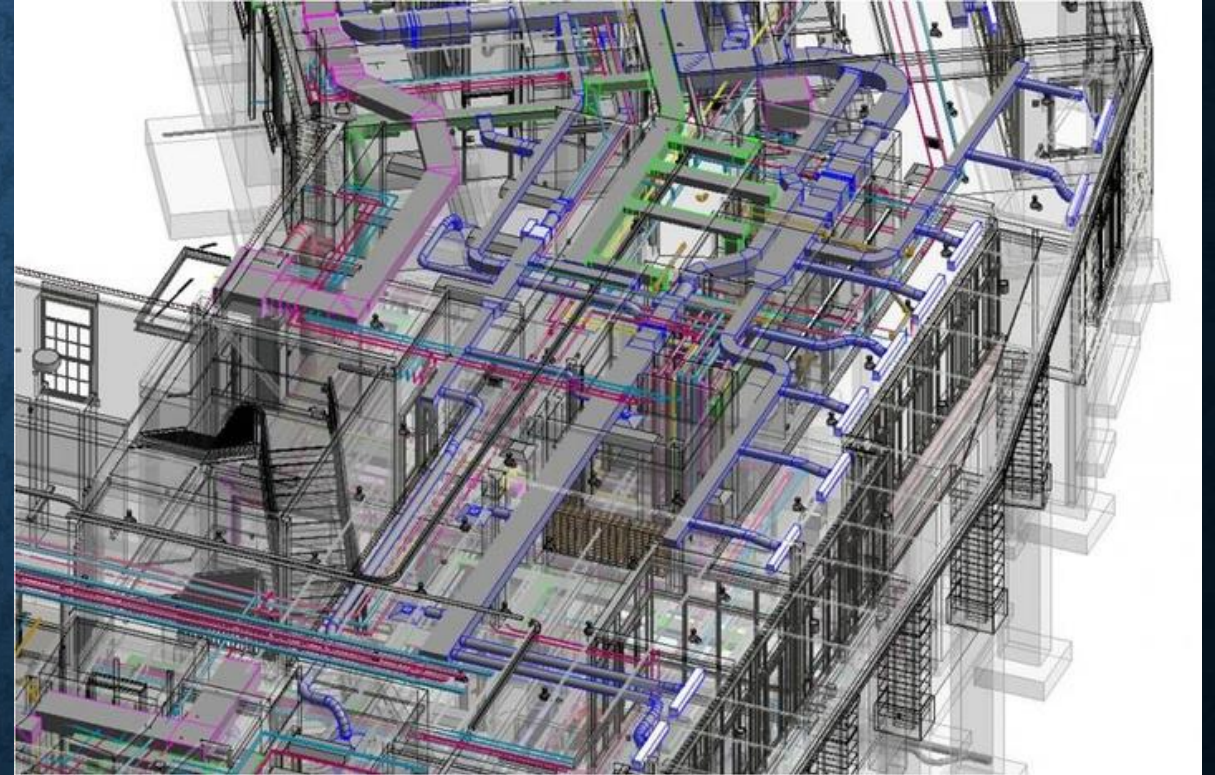
Common Timeline • Design drop

- Combined VE and next stage of design simultaneously

	Mth 1	Mth 2	Mth 3	Mth 4	Mth 5	Mth 6	Mth 7	Mth 8	Mth 9
Design Period 1	Yellow	Yellow	Yellow	Light Green	Light Green	Light Green	Light Green	Light Green	Light Green
Estimate	Light Green	Light Green	Light Green	Green	Green	Light Green	Light Green	Light Green	Light Green
Value Engineering	Light Green	Light Green	Light Green	Light Green	Light Green	Yellow	Yellow	Light Green	Light Green
Design Period 2	Light Green	Light Green	Light Green	Red	Red	Red	Red	Red	Red

RECENT EVOLUTION

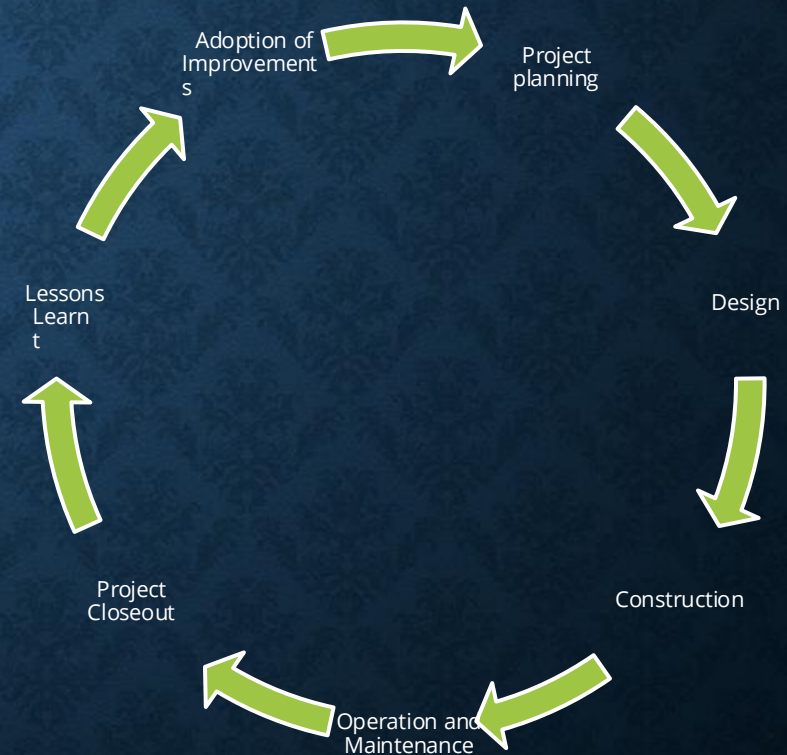
- BIM • Clash detection
- Collaborative tools Common
- Data/Document Environments
- ISO 19650



PRE-EMPTIVE VALUE ENGINEERING



- Lessons learnt Applying these ahead of the programme
- Applying these ahead of the programme
- Material blacklists*
- International alternates (BRANZ issues)
- Efficient design processes (BRANZ issues)
- ECIs
- ECIs
- ECIs



REAL TIME VALUE TRACKING

- Clash detection models –
 - Clash detection models – Weekly/Fortnightly iterations
- Live tracking
- Senior quantity surveyor assessment
- Collaborative design team and client discussion
- Revizto, BIM 360, Navisworks



– CHRISTCHURCH, NEW ZEALAND

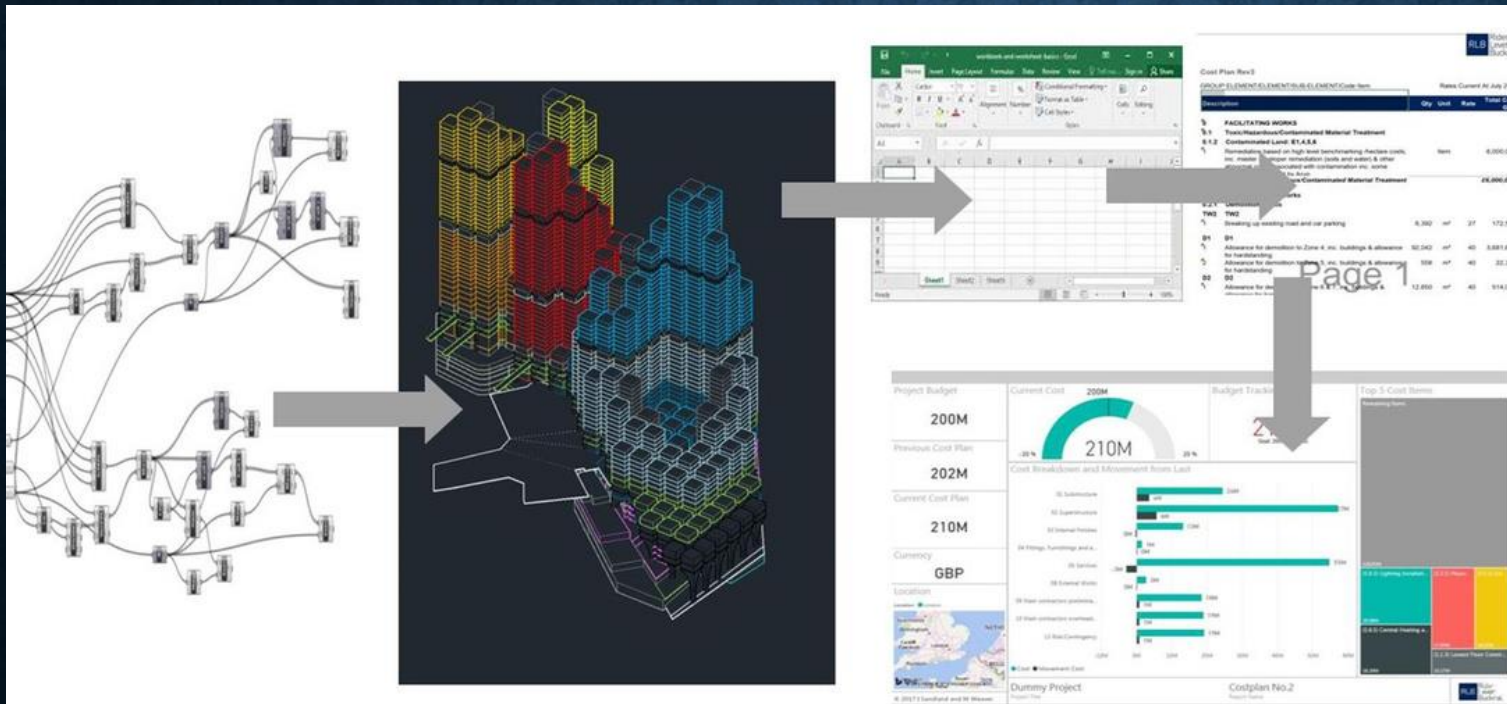
“RLB’s collaborative approach to utilise the data created in the project models provided close to real-time (weekly) element increases in quantum and cost. This allowed Warren and Mahoney, and the rest of the design team to discuss these changes as they happened and for this to be aligned to budgets and costings. In working together in this way, we were able to avoid the far to common end of phase cost report surprise and the need to enter the no-win value management process.”

*Brad Sara
Associate Principal and Digital Business Advisor
Warren and Mahoney*

PARAMETRIC MODELLING



- Mecca Example – Views of [Masjid al-Haram](#) Mosque - maximising value



- Tools •
- Dynamo
 - Grasshopper
 - Revit
 - Rhino
 - SketchUp

Commercial-in-confidence

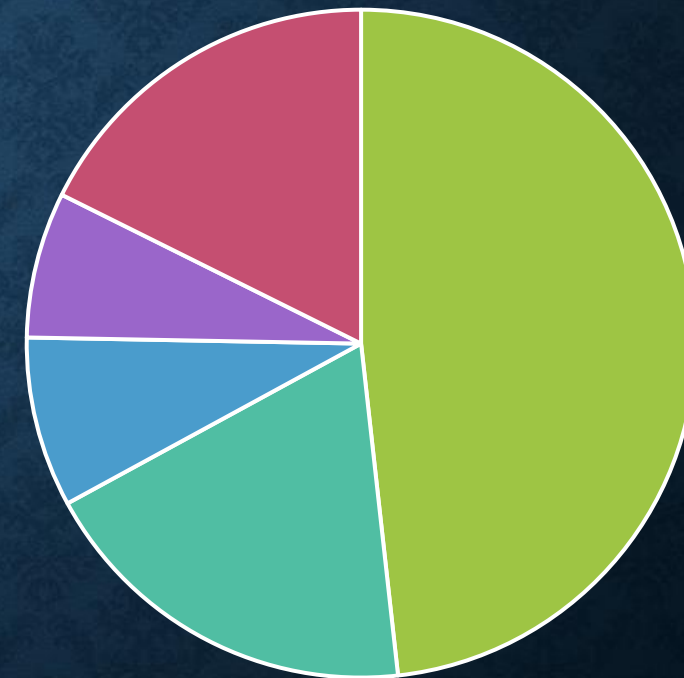
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AI DESIGN OPTIMISATION

- Site and Geometry set Analyse
- spatial requirements
- Craft room layouts and functional building designs through simulation
- Automating detailed drawings



Optimisation Priority



■ Carbon ■ Cost ■ Mas ■ Area ■ Programme

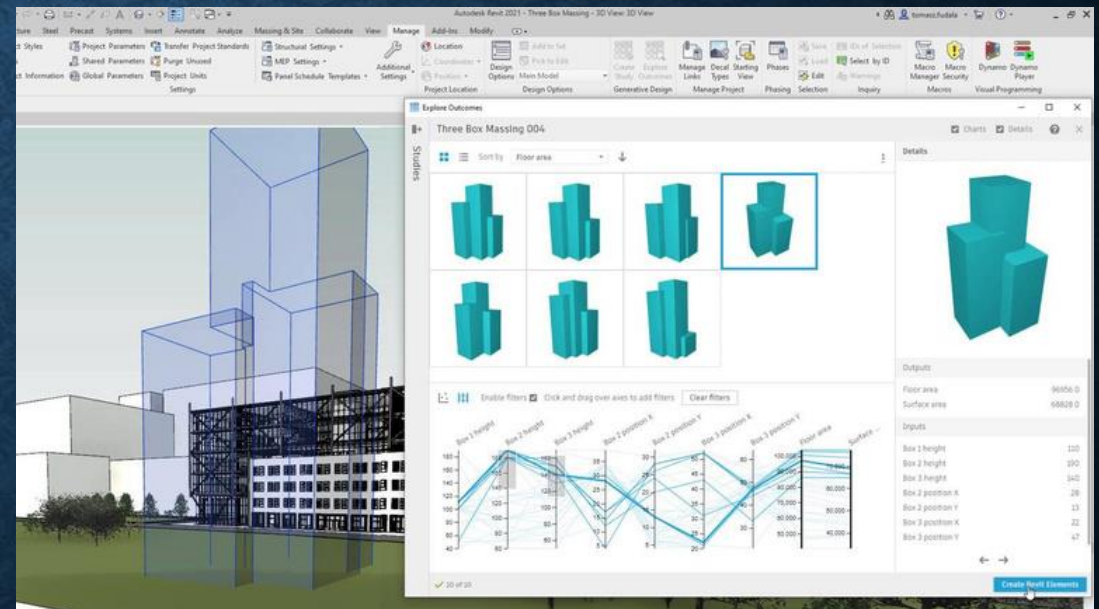
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GENERATIVE DESIGN



Human verification required

- Auto generated designs Car park
- example Coupled with language model
- prompts with language model prompts = Instant results



ENHANCED ANALYTICS

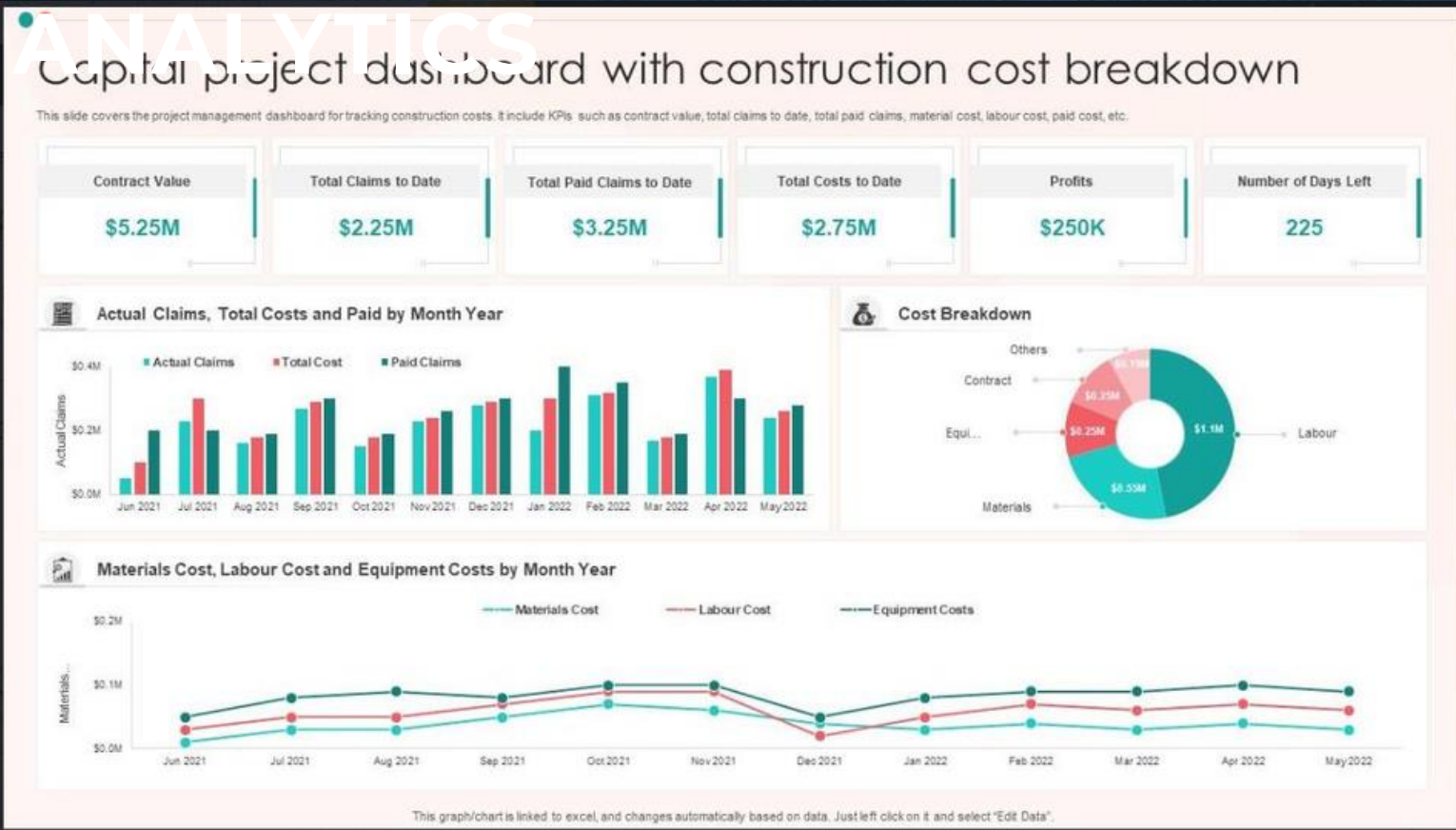


“Without data you are just another person with an opinion”

- Data is the king
- Enhanced through AI to fill the gaps
- Predictive analytics and trends
- Couple that with user friendly dashboards
- Value can be gained from the outset



ENHANCED ANALYTICS



- Dynamic
- Pinpoints areas of interest
- Great comparison
- User friendly

DISRUPTION CONTROLLED

- **D** Until the machines take-over, we need to maintain quality
- Reliance on software is in danger of becoming lazy, and reliant without QA



Commercial-in-confidence



- **Training and Skill Development:** Ensure that your team is trained in the use of new technologies and understands how to leverage them for VE.
- **Pilot Projects:** Start with pilot projects to test and refine new approaches before full-scale implementation.
- **Stakeholder Engagement:** Engage all stakeholders early in the process to gain buy-in and ensure that their needs and concerns are addressed.
- **Continuous Improvement:** Regularly review and refine your VE processes based on feedback and new technological advancements.

Construction Clients Group Presentation



Let's improve today but not at the
expense of tomorrow

DO NOT HESITATE TO CONTACT ME

Tom Chatterton BSc(Hons) MRICS MNZIQS Reg. QS

Director **Rider Levett Bucknall 021992184**

Director

Rider Levett Bucknall

021992184

Property Council South Island Executive NZIQS Board

Member Board Member

Chair of the South Island Education Trust

Chair of RLB's Global Digital Advancement Committee

Tom.Chatterton@nz.rlb.com





Sam Twyman
Civil Portfolio Manager

Guest Speaker



Case Studies on The Application of Value Engineering and Value Management - A Multidisciplinary Approach

Date: 31/07/2024

By: Sam Twyman – Summerset Civil Portfolio Manager

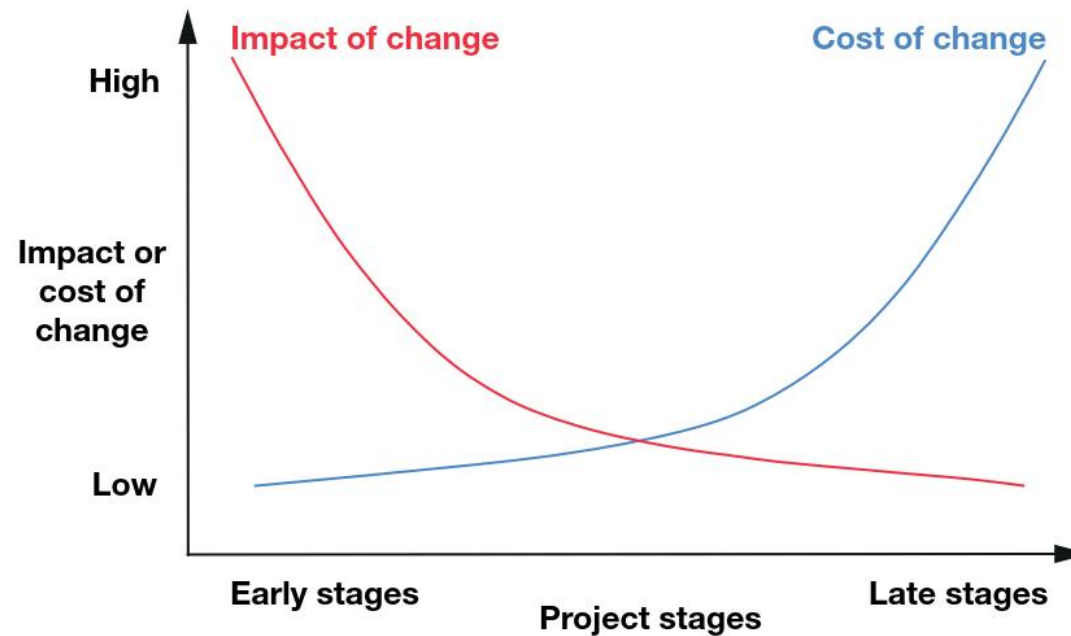


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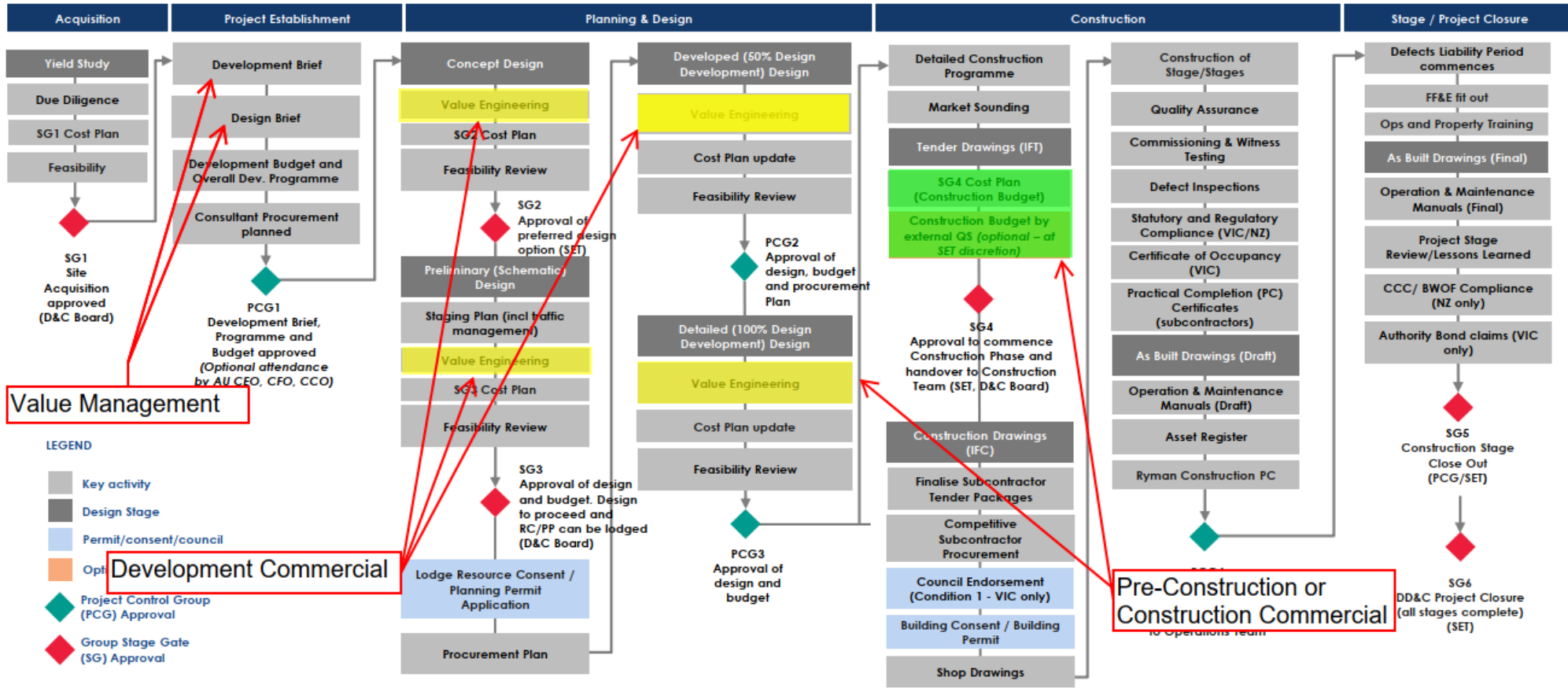
- 1 VE vs. VM within the Retirement Development Context
- 2 Relationship to other Project Management Activities
- 3 Discipline Ownership and Evaluation
- 4 Case Study 1 and 2
- 5 Lessons Learnt

1. VM/VE in Retirement Development

- **Value Management:** Early – sets product specification and level of service commiserate of the market. Set at Development Brief.
- **Value Engineering:** Throughout Procurement and Design - Process of seeking to be more efficient and effective in ways to achieve the project outcome (Development Brief). Assessed throughout and even during construction (retirement development specific – see below)



3. Discipline Ownership



2

4. Case Study Project 1



4. Case Study Project 1



4. Case Study Project 1



4. Case Study Project 2



4. Case Study Project 2



5. Lessons Learnt

- Why VM/VE often go poorly:
 - Not taking the required time (often shoehorned in)
 - Not precise enough before a decision is made (initial decision metrics don't reflect final)
 - Not undertaken early, often enough (as BAU) or trying to be retrospective.
 - **Does not involve the right stakeholders.**
 - Previous decisions are not reviewed prior to starting.
- Solved by a Multi-Disciplinary Approach, lead by different members of the Project Team depending on the progress of the project and undertake throughout the projects design development.



Francois Baudet

CCG Regional Chapter
Christchurch Member

Panel Discussion





Alan Palmer

CCG Regional Chapter
Christchurch Co-chair

CCG Updates and Events Programme



**Construction
Clients' Group**
CONSTRUCTING EXCELLENCE

Events Programme 2024

March	April	May	June	July	August	September	October	November
Auckland Date: 13th Host: Minter	Wellington Date: 3rd Host: DoC	Northland Date: 15th Host: Whangarei DC	Auckland Date: 12th Host: Simpson Grierson	Christchurch Date: 31st Host: CCC	Wellington Date: 7th Host: Rubix	Waikato Date: 4th Host: TBC	Wellington Date: 16th Host: TBC	Northland Date: 6th Host: TBC
	Christchurch Date: 17th Host: TBC	Waikato Date: 22nd Host: Downer	Auckland Date: 26th Host: Eastern Gateway			Auckland Date: 11th Host: AT	Christchurch Date: 23rd Host: Tonkin + Taylor	Auckland Date: 13th Host: Jasmax
						NEW Otago Date: 25th Host: TBC	Bay of Plenty Date: 30th Host: TBC	Waikato Date: 20th Host: TBC

CCG Regional Networking Events (RNE)

Christchurch Date: 20th	Northland Date: 30th	Wellington Date: 16th	Christchurch Date: 19th	Auckland Date: 25th	Northland Date: TBC	Christchurch Date: 17th	Auckland Date:	Christchurch Date: 12th
								Wellington Date: TBC

CCG National Workstream Events

				Modern Procurement Date: 3rd Host: Frequency	FMBP Group Date: TBC Host: Virtual	Safety in Design Date: TBC Host: Virtual	FMBP Group Date: TBC Host: Virtual	FMBP National Date: TBC Host: Virtual
								Client Excellence Date: TBC Host: Virtual

March	April	May	June	July	August	September	October	November
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Tell us what you thought of our event today!

Scan this QR code on your mobile device and click to open the link forms.office.com and answer the questions.

CCG Event Feedback



Thank you to our host

