



PREVENTION. CARE. RECOVERY.

Te Kārohehana Ahikiri Hanga Whiua

Integration of Architecture into change activities

Presentation to WWISA
November 2003

Jeffrey Cornwell
Architecture and Standards Manager



What is meant by Architecture?



- A set of guiding principles to ensure that all intentions of the activity are met - the “ilities”.
- So what’s so hard about that?
- Why don’t architectural qualities make it into projects and, if they do, why are they often dropped out?



Architectural challenges



- Projects tend to be insular.
 - They are likely to have been initiated in response to a specific business need.
 - Sponsors incentives are likely to be linked to their performance, not the performance of others leveraging off platforms.



Architectural challenges



- Project imperatives
 - “On time - on budget” mantra.
 - Carrots and Sticks all derive from this.
 - Architectural qualities often do not add to and may detract from immediate project objectives.
 - First to be sacrificed when pressure comes on.



Architectural challenges



- Strategic requirements may not be understood
 - Only a few people in the organisation may know or be thinking about the five year goals
 - Once they get even marginally technical, few translate the strategic requirements into an immediate context.
 - Wood for the trees.



Architectural challenges



- Things not directly related to functional requirements are often overlooked
 - Not exciting
 - May not be understood
 - Things like:
 - Hardware and software platforms
 - Development environments
 - Disaster recovery instances
 - Hours of support
 - Hours of operation
 - Availability
 - Response times
 - etc. etc.



Architectural challenges



- So why to architectural considerations often get dropped?

Never attribute to malice what can adequately be explained by stupidity.

- - -Nick Diamos



ACC environment



- Crown Entity.
- Mostly monopoly.
- Unique scheme, core business is personal injury insurance.
- Outsourced IT capability.
- Long term contracts with predominant outsourcer.
- Contestable contracts with third parties for aspects of software development.



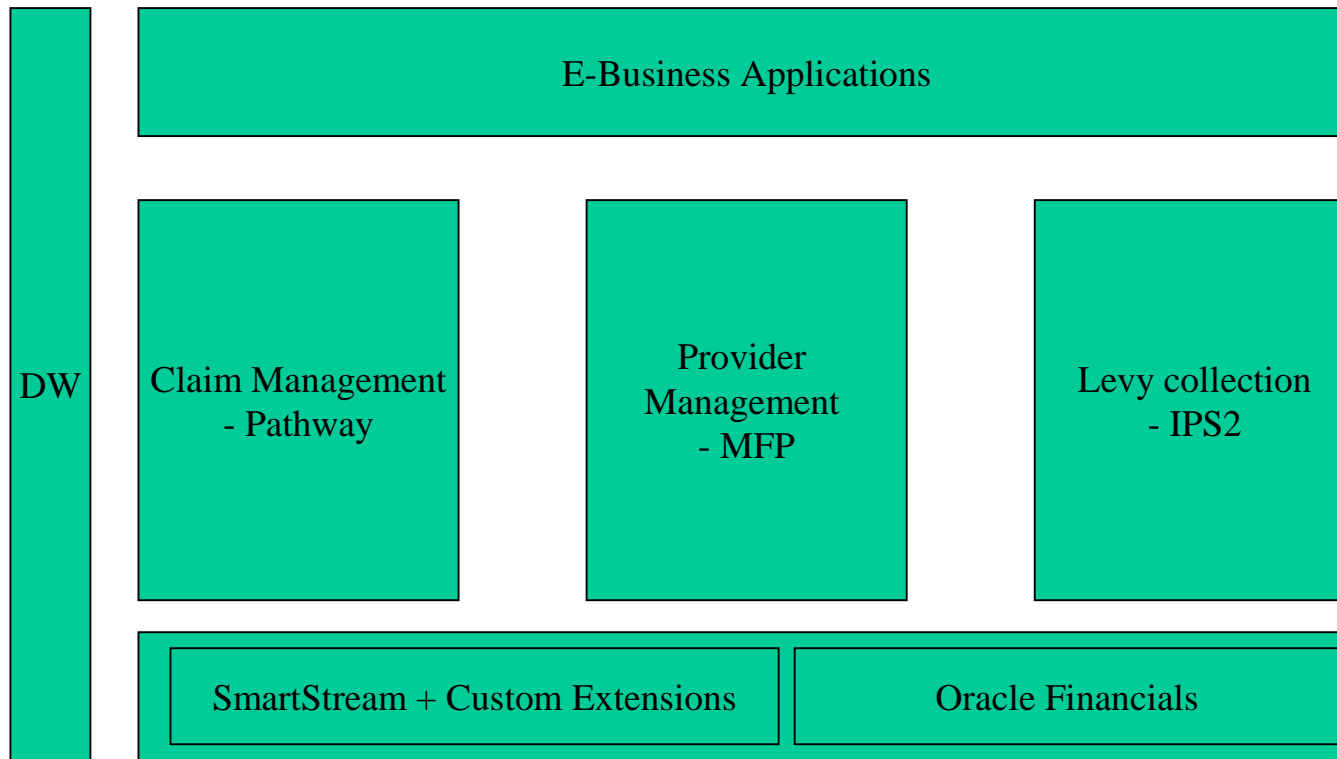
ACC environment (Continued)



- Extensive bespoke systems.
- Predominantly aligned with lines of business.
- Claim Management system C++
- Newer systems Java / J2EE.



Line of business applications



One Approach:



- Shadow “Functional” Requirements with a companion set - “Non functional” Requirements.
- Some hang ups over the name.
 - Architectural?
 - Technical Infrastructure?



Non - functional requirements



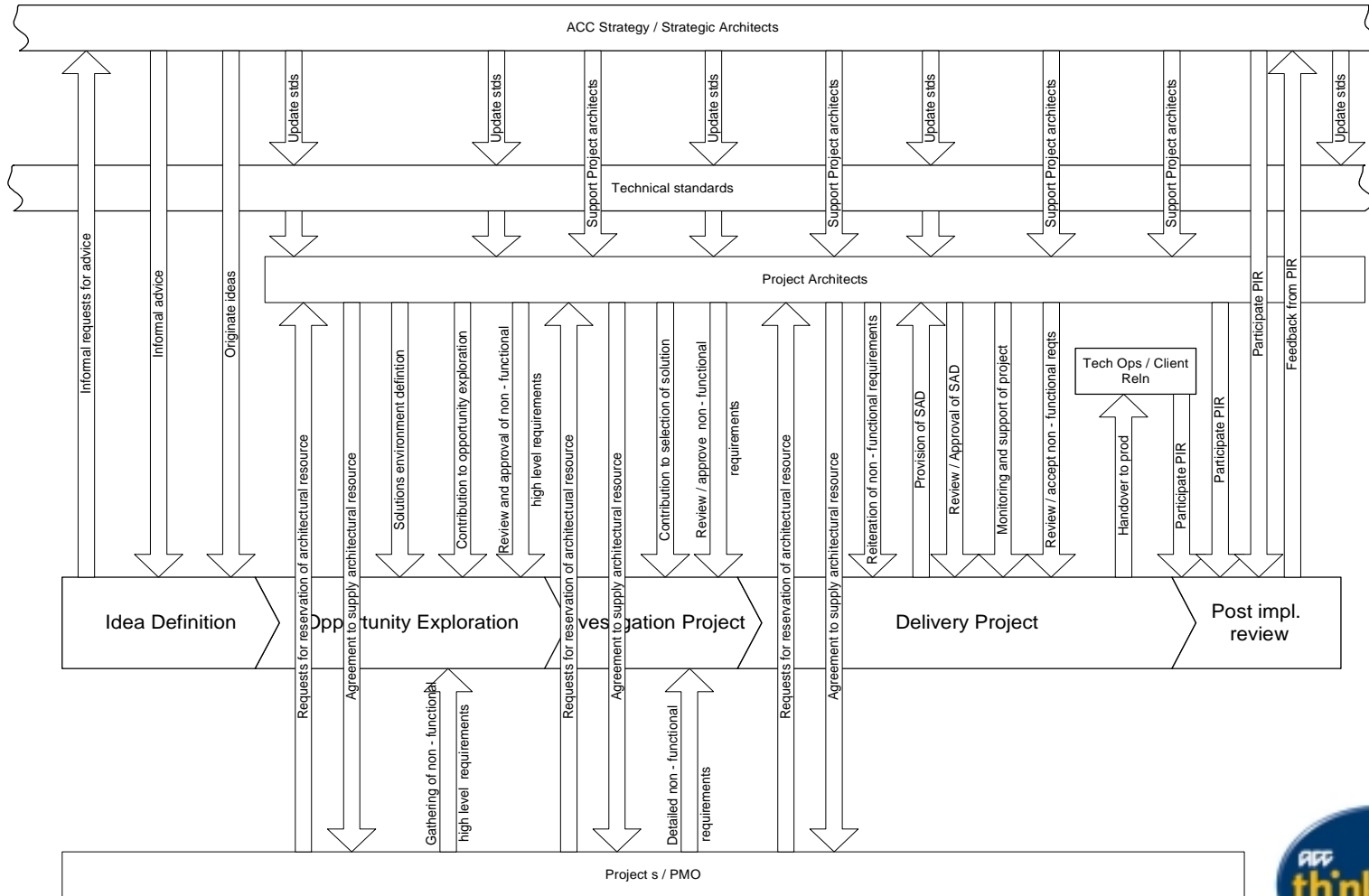
- Q: At what point do non functional requirements enter into a project?
- A: All the way through!!



Scary diagram!!



PREVENTION. CARE. RECOVERY.
Te Kapōrehana Ahikōi Hanga Whāia

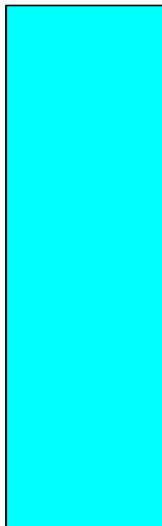


Not quite so scary



ARCHITECTURE AND STANDARDS TEAM HIGH LEVEL ROLES AND RESPONSIBILITIES

Contribution to "ideas" that may enter the SDLC



Support for operational systems



- General Advice on technology opportunities.
- Development of technology strategies to support Business strategy.

- No formal involvement
- Informal advice as required.

- Definition of technology constraints
- Identification of technology based solutions.
- Architectural impact assessments

- Contribute to specifications
- Participation in selection of solutions

- Define and communicate standards
- Confirm compliance of design to architectural standards and strategy.
- Approval to technical solutions.
- General advice

- Monitor remaining service life of IT investments.
- Identify potential failure issues and recommend treatment.



Non - functional requirements



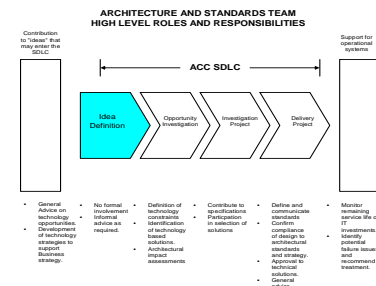
- Depending on where in the lifecycle a project is, the role of the architect varies.
- Emphasis is placed on the point that architectural qualities need to be built in from the start of a project.
- It is difficult or impossible to retrofit.
- If retrofitting is possible, the cost amplifies through the project.



During Idea definition phase



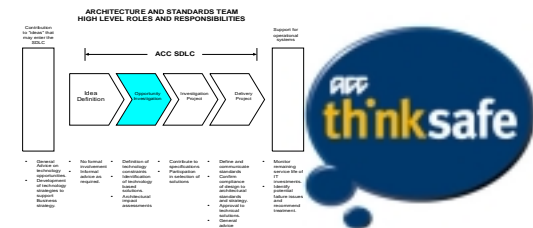
- No formal role for architects
- Will provide informal advice as required.
- Will also act as originators of idea definitions for infrastructure initiatives



Opportunity Exploration phase



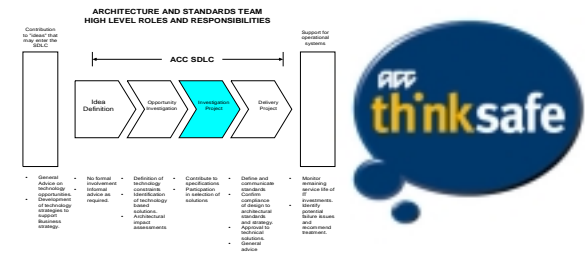
- Commences with negotiation with project manager for assignment of architect time to end of phase.
- Key role of the architect is to:
 - Ensure that all non - functional requirements have been taken into account as per templates.
 - That business case submitted to proceed to Investigation project has made sufficient allowance to address all non - functional requirements.



Investigation project



- Approval in principle has been given to proceed.
- Output of Investigation project is identification of a solution and firm agreement with solution provider for implementation of a solution.
- Could be RFI or negotiation of terms under existing contracts.
- Contribution to RFP process etc.
- First stage is again negotiation of allocation of resource.



Delivery project

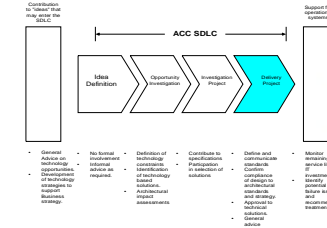
- Once again, first stage is negotiation of allocation of resource. This is likely to be more intense and may require the engagement of external resource.
- It is not the allocation of a solutions architect - this is the responsibility of the solution provider.
- The role is to ensure that strategic intents are taken into account.



Delivery project (Continued)

- Very early activity is briefing to all actors to reinforce strategic goals and particular areas of attention for the project.
- Important because many participants are likely to be new to the project.
- Oversee preparation of the Solutions Architecture Design (SAD).
- This will go through several iterations through the life of the project.

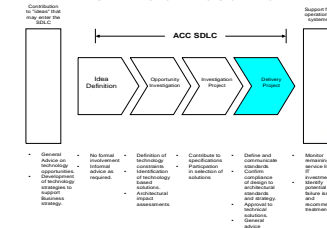
ARCHITECTURE AND STANDARDS TEAM
HIGH LEVEL ROLES AND RESPONSIBILITIES



Delivery project (Continued)

- Initial SAD describes the solution and the approaches to be taken. Construction approved against this.
- Final iteration pre commissioning describes as built, with RUP style views described.
- Intermediate iterations will record such things as approaches that have been taken, trade offs and reasoning.
- SAD forms the basis for ongoing change controlled system updates

ARCHITECTURE AND STANDARDS TEAM
HIGH LEVEL ROLES AND RESPONSIBILITIES



Moving forward - EAB



- A perennial challenge with building infrastructure is justifying business cases in a business context.
- converged during 2002 with a reconciliation that business points of pain derived from infrastructure conditions that had been previously described by technologists
- recognition that a quantum shift in business capability would need to be accompanied by a similar scale shift in technology.



Moving forward - EAB



- **Desired business capabilities included:**
 - Rapid deployment of business change.
 - Greater collaboration with external parties (particularly health).
 - Higher reliability and simplified maintenance.
 - Less dependence upon device and location.
 - Single view of customer.
 - Real time information.
 - High quality data.



Moving forward - EAB



- First Stage - Information Services Strategic Intent (ISSI).
- Accepted by ACC board and senior management February 2003
- Next step codification into an Enterprise Architecture.



Moving forward - EAB



- Developed 1H 2003.
- With more detail will deliver ISSP.
- Likely content . . .
 - TOGAF / Zachman style Enterprise architecture driven from business architecture downwards
 - Watch this space

