

# Research Problems at the Coal Face

Andrew Boake, ABSA Group IT





This talk deals with the challenges we face in the Absa Solution Design Team, and which I think present interesting research problems.





Context: ABSA is a big bank.



- 36 000 people (80 000 including Barclays)
- 8.8 million customers
- 1500+ people in centralized Group IT, serving 40+ business units in 5 clusters
- 770 branches
- 7500 autobanks
- 33 call centres, 11 million calls a month
- Infrastructure supports several banks



Two years ago, I helped to start a Solution Design team at ABSA, intended to give Architecture an execution arm into the projects.







Solution Design is now a division of 25 people, in demand, but expensive and slow.



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We interact with the important project participants, playing an integrating and facilitating role.





Where are we? In the journey from artist to craftsman to production line to engineering, I would venture that we are still artists.



- We are actually an internal consultancy.
- We have to recover our time and effort in real money from our clients.
- We have been successful at a small scale.
- We have added value, and are therefore part of the mandated project process.
- We do not use sophisticated tools, much of what we do is manual.
- We do not see one another a lot we are often out at clients.
- We do not collaborate nearly enough.



Our first major challenge is efficiency.





We need to provide services to our clients more quickly, and with less effort, yet maintaining quality.



- Being part of Barclays brings added requirements, both legislative & business.
- Barclays emphasizes return on investment, hence efficiency.
- Demand has increased.
- Expected delivery time is shrinking.
- People with the necessary skills are hard to come by.
- We need to become more efficient:
  - Process
  - Tools
  - Knowledge Management



Process Tools Knowledge Management



We have worked on product consistency: people are now beginning to understand the positioning, value and expected contents of the different design products.



"I think you should be more explicit here in step two."



We have also worked on process consistency. We are trying to be repeatable and predictable in our work.



The daydreams of cat herders



We have a system of peer review that each designer must go through before delivering his design to a client.



Most scientists regarded the new streamlined peer-review process as 'quite an improvement.'



Tools are an essential element in working efficiently.





### We engage clients with a formal service agreement.





We have worked on tools for design documentation.





Our different products have document templates that explain quite clearly what must be included.





We also have tools to help us estimate the time and effort required to do a design.

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These tools help us to understand the kind of project and type of resources required.





And we have tools that help us to understand and document the necessary system qualities.

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5			The solution shall comply to include an audit footprint (before image and after image) of all data that is undated by a user				
6			The solution shall provide a business administrator the ability to request specific audit reports				1
L_	A		The solution shall be available to the business community during official business unit business hours			1	
7	Availability		(xxhxx to xxhxx, x days a week)				
8	Data		The solution shall keep historical data on-line for x years				
9	Retention		The solution shall keep archived data off-line for x years			<u></u>	
10	Disector		The solution shall backup data on a daily basis during the maintenance slot				
11	Disaster		The solution shall comply to a recovery time objective of x hours				-
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13	Error		between interfacing components. Interface messages must not be lost				
14	Management		The solution shall escalate all technical errors to appropriate technical support staff				1
15	Integration		The solution shall interface with the following systems :- elaborate on each interface definition			1	1
-			The solution shall provide the following monitoring reports:- elaborate on each monitoring			1	1
16	System		requirement such as performance thresholds, capacity thresholds				
17	Management		The supplier shall provide dedicated helpdesk for system users				
18	management		The supplier shall provide 1° line & 2 <sup>10</sup> line technical support for software. Absa Group IT shall provide 1° line support for all hosted environments				
19	Deufermenne		The solution shall download screen pages within x seconds during average load and y seconds during peak load				
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We still need to standardize on the notation we use for different design aspects, and on the traceability between them.





One of our biggest challenges is knowledge management. You need to be at ABSA for six months before you have accumulated enough knowledge to start to do designs on your own.





To begin to share our knowledge, we have started to document the current systems, infrastructure, business processes and products. We call these landscapes.



Geographical data layers give us a good metaphor. Here, different layers provide spatially-related information for different stakeholders.

#### ABSA Insurance Services Landscape











We are also busy documenting a pattern language. Design is often about applying well-understood (but not well documented) patterns.

## Banking Solution Design Pattern Language







	Pattern Name
	Information about the context where this pattern could be applied, and the forces that must be taken into account when applying it.
Context & Forces	Context Pattem Link
Examples	An example that illustrates a situation where the pattern could be applied. This section should also include hyperlinks to design documents which detail how the pattern has been applied in practical situations.   Design Decign Decument Link
Solution	Description that explains how the pattern resolves the forces. This should be accompanied by diagrams that show the structural and behavioural aspects of the solution.
Relationships	Information about, and links to, patterns that are related to this one. Examples include more detailed patterns that can be used to complete this one.



## We are starting to use a Solution Design Collaboration portal.

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Our second major challenge is agility.



Achieving agility however is often directly opposed to ensuring stability.





Becoming agile has its challenges.



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