



# MONITORING SERVICE OPERATIONS

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4 SEPTEMBER 2012

**Monitoring the service operations of a large financial enterprise using a systems integrator approach to alerting and event management.**

**A case study of a large Australian Bank.**

# Abstract

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Monitoring the service operations of a large financial enterprise using a systems integrator approach to alerting and event management.  
A case study of a large Australian Bank.

This paper will outline the overall ITIL Service Management strategy that was developed but will focus on the enterprise monitoring and alerting capabilities that form the foundation of good event management. A target state will be described and the integration approach taken to ensure a successful widespread roll out of monitoring agents across a large number of configuration items (both infrastructure and application) that comprises the system landscape. Outcomes both in terms of improved processes and key performance indicators, such as mean time between failure and mean time to restore service will also be described. The use of these capabilities by both internal and outsourced service providers and by a centralised National Operations Room will be considered.

# Westpac – some information

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## WESTPAC

Is one of the four major banking organisations in Australia and one of the largest banking organisations in New Zealand. Westpac provides a broad range of banking and financial services in these markets, including retail, business and institutional banking and wealth management services. They have branches, affiliates and controlled entities throughout Australia, New Zealand and the Pacific region, and maintain branches and offices in some of the key financial centres around the world. They were founded in 1817 and were the first bank established in Australia. Last financial year, their market capitalisation was \$61.6 billion and they had total assets of \$670.2 billion. Operations comprise five key customer-facing business divisions operating under multiple brands, serving around 12.2 million customers.

1. Westpac Retail & Business Banking in Australia under the Westpac and RAMS brands.
2. Westpac Institutional Bank, delivering financial services to commercial, corporate, institutional and government customers in Australia, New Zealand, United States, United Kingdom and Asia.
3. St. George Banking Group in Australia under the St. George, BankSA and Bank of Melbourne brands.
4. BT Financial Group (Australia), Westpac's wealth management business.
5. Westpac New Zealand

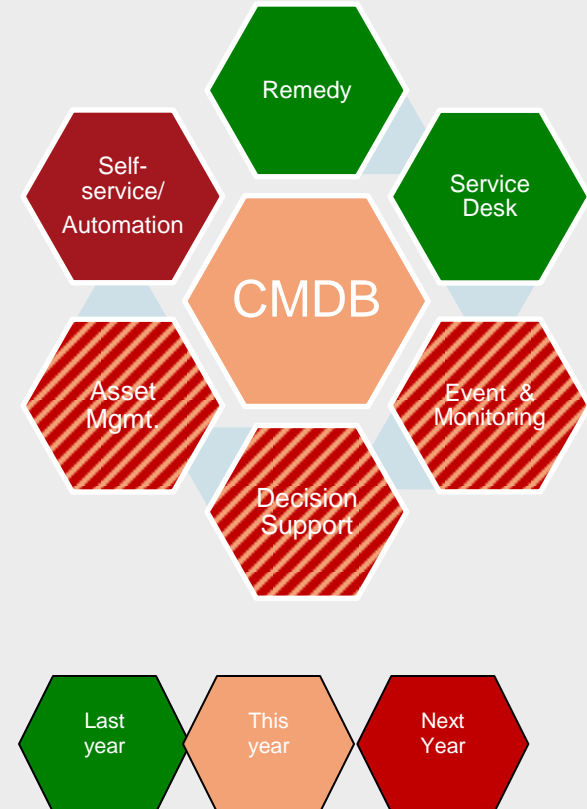
## WESTPAC AUSTRALIA METRICS – covered by this monitoring and alerting process

1. Over 3000 ATMs, 1500 branches, 33,000 Staff, over 2 million active customers.
2. 1 million plus active Internet Bankers with 350,000 also using mobile devices. Supporting up to 10,000 concurrent online connections, processing \$4 billion retail payments and \$40 billion corporate payments a week
3. Over 1000000 Devices, 1500 Applications, 5 Onshore Data Centres

# Westpac IT Service Management - high level target strategy

2 years ago Westpac commenced a new investment plan to establish the foundation of an effective integrated Service Management platform for use across the Westpac Group. Scope covers:

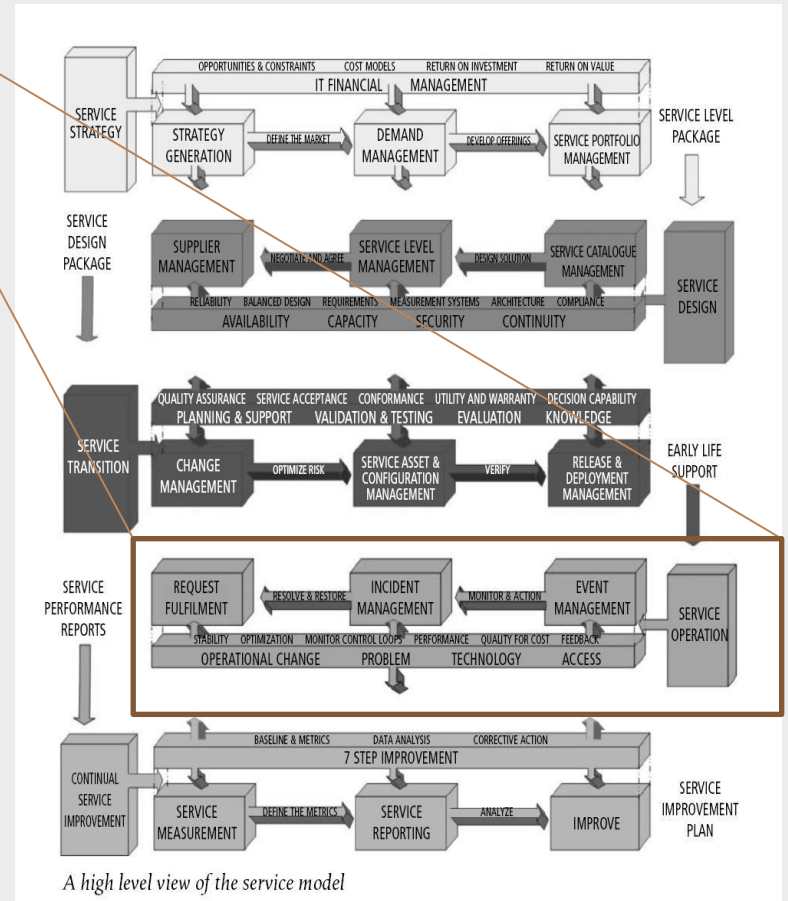
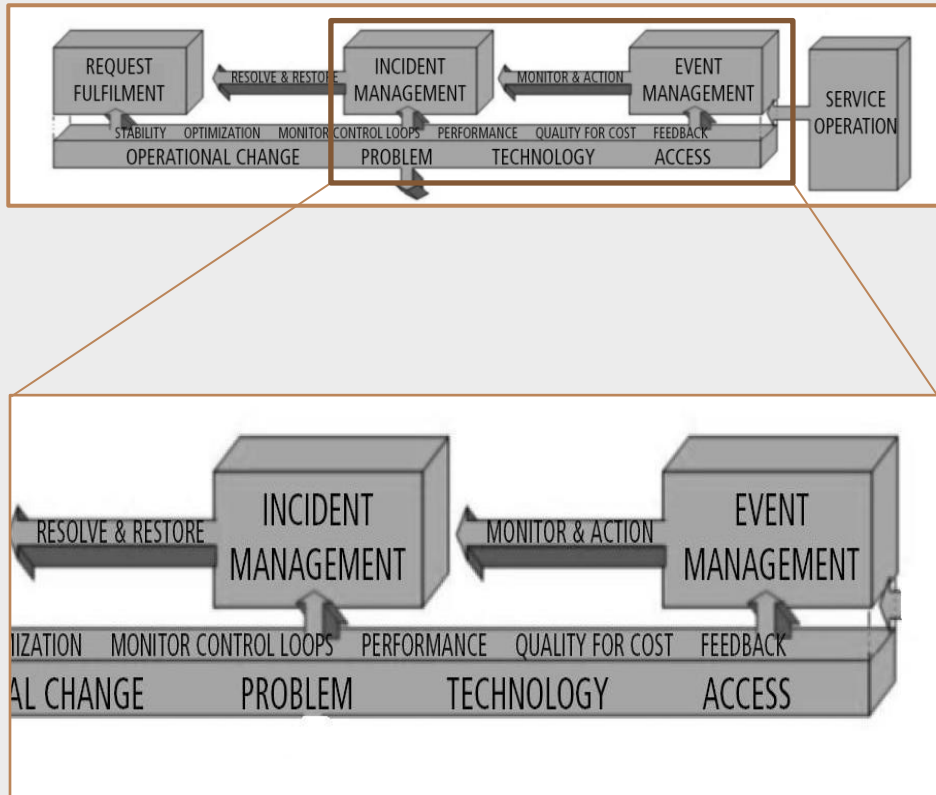
1. **One unified tool & common SM processes** – BMC Remedy tool supporting group wide processes for Incident, Problem & Change. Work to establish and mature process efficiency and compliance.
2. **One unified Service Desk** for Technology - underpinned by Knowledge Management and measured by SLAs. Strategy is to implement self service capability in order to reduce call volumes.
3. **One CMDB** – central Configuration Management Database that is the single source of truth containing all applications, platforms and devices. Ensure compliance with the enterprise change process. Complete auto-discovery implementation.
4. **“Manager of Managers”** – single pane of glass for Event Management – integration and configuration completed, but monitoring only covers a small percentage of fleet;
5. **Decision Support Capability** - Analytics, Dashboards & SLA measurement and reporting. Deliver a common and consistent way for providing shared information.
6. **Asset management** – manage costs, improve utilisation and comply with internal and external configuration and usage policies from initial request through to retirement.
7. **Self-service & Auto-Provisioning** to assist in getting products to market more rapidly. Requires standardising offerings, and automating the service chain.



The Journey so far

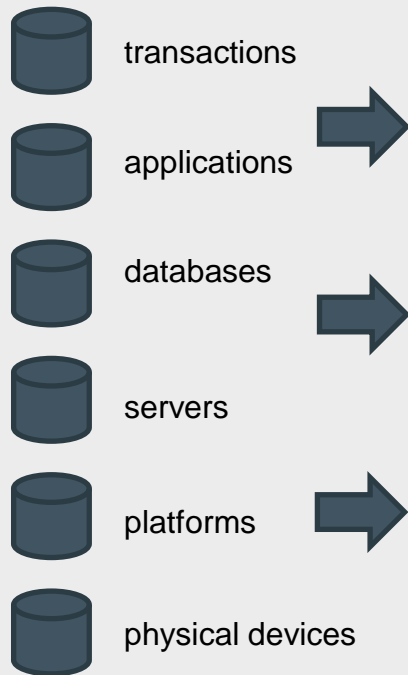
# ITIL Context

Today's presentation will focus on Service Operation capabilities and in particular the monitoring and alerting that is the foundation input to effective event and incident management

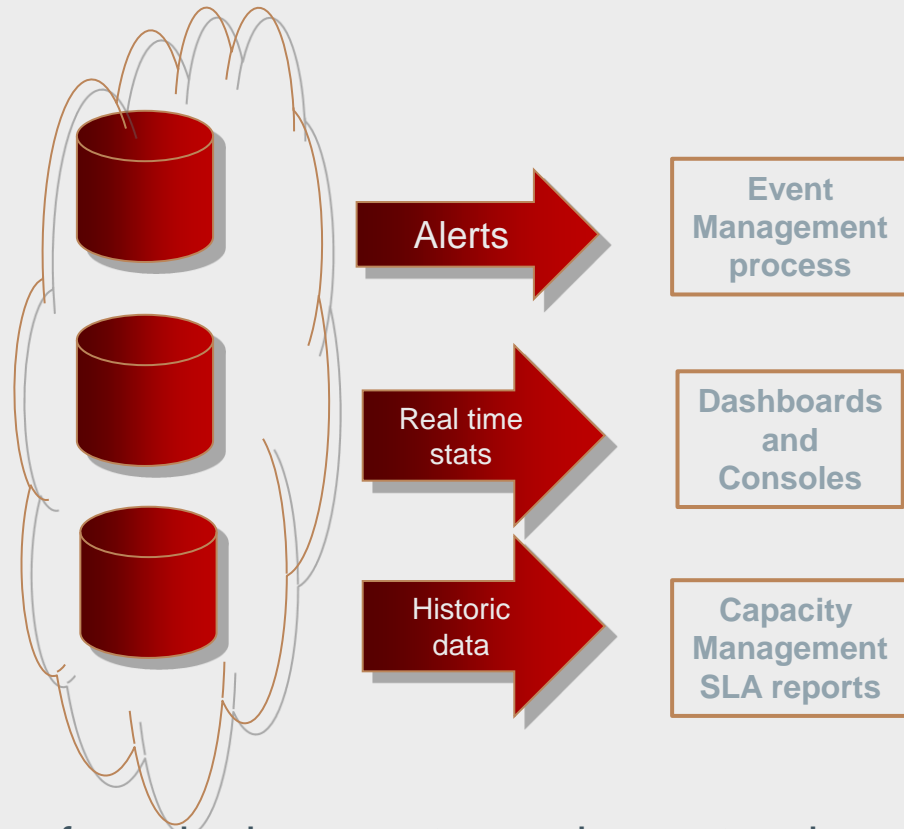


# Monitoring Outputs

Monitoring has multiple sources

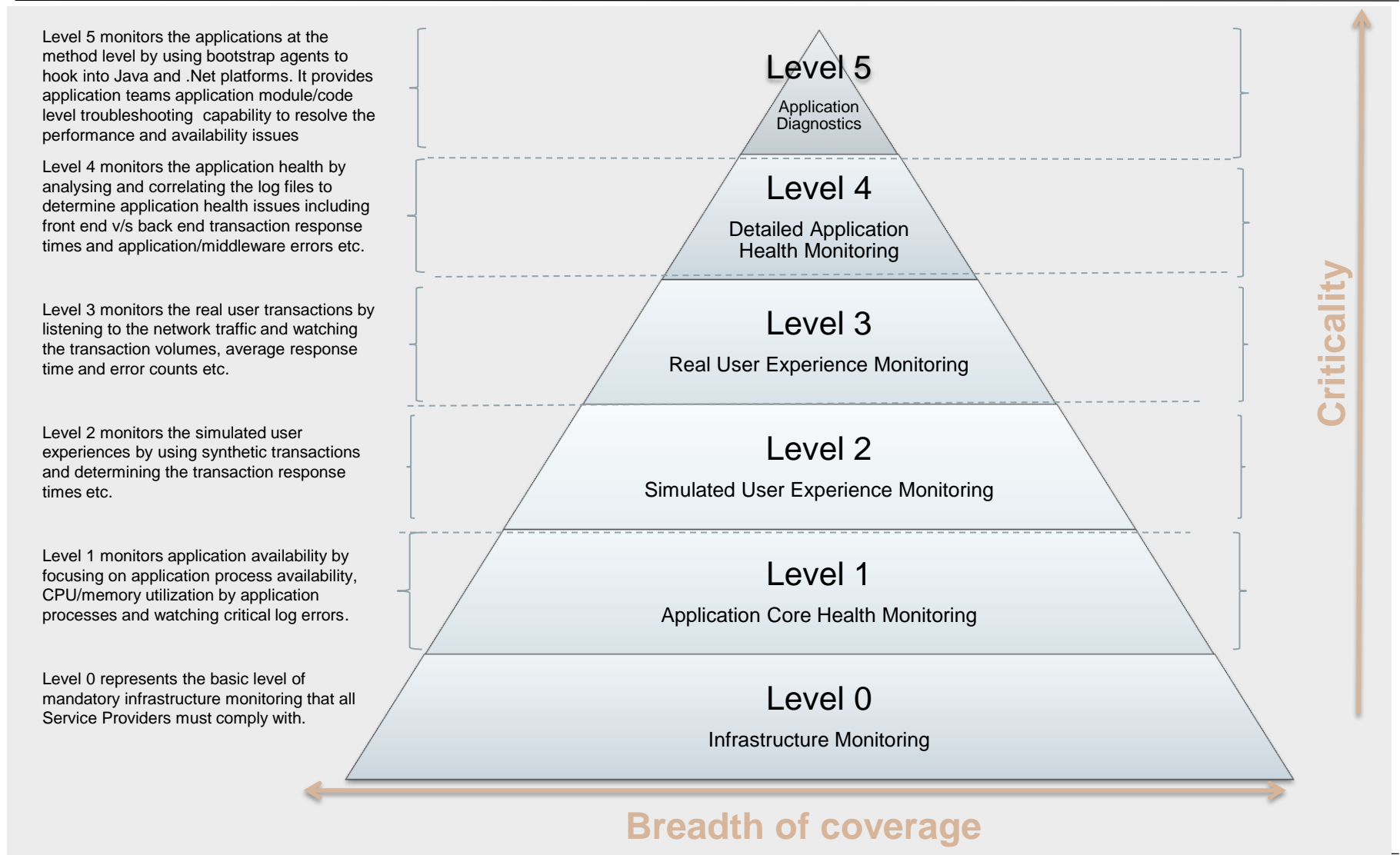


But it has three primary outputs

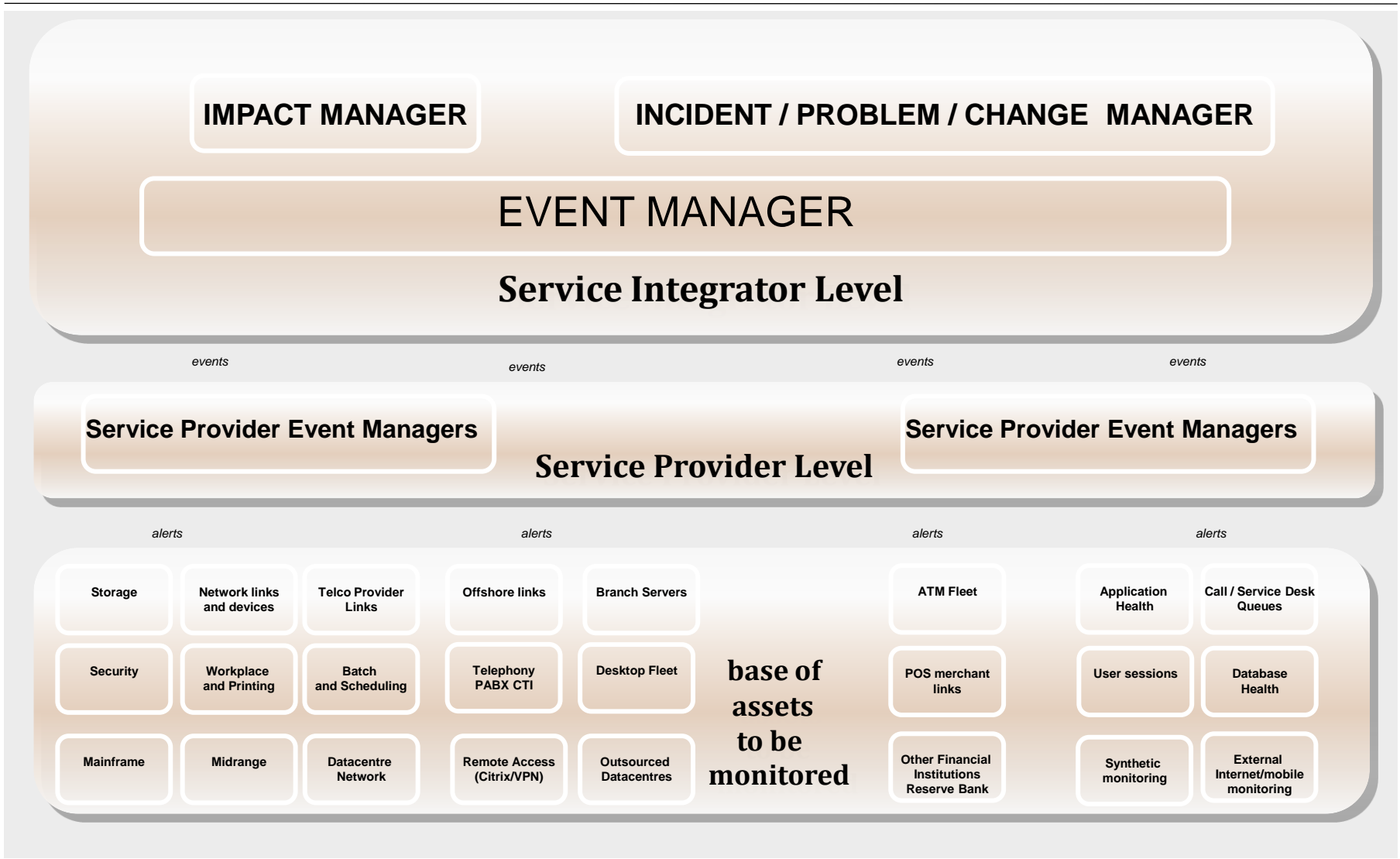


The installation and configuration of monitoring agents requires extensive effort and tuning to deliver comprehensive and consistent outputs of the quality required for integration into event management process.

# The level of monitoring is determined by application criticality

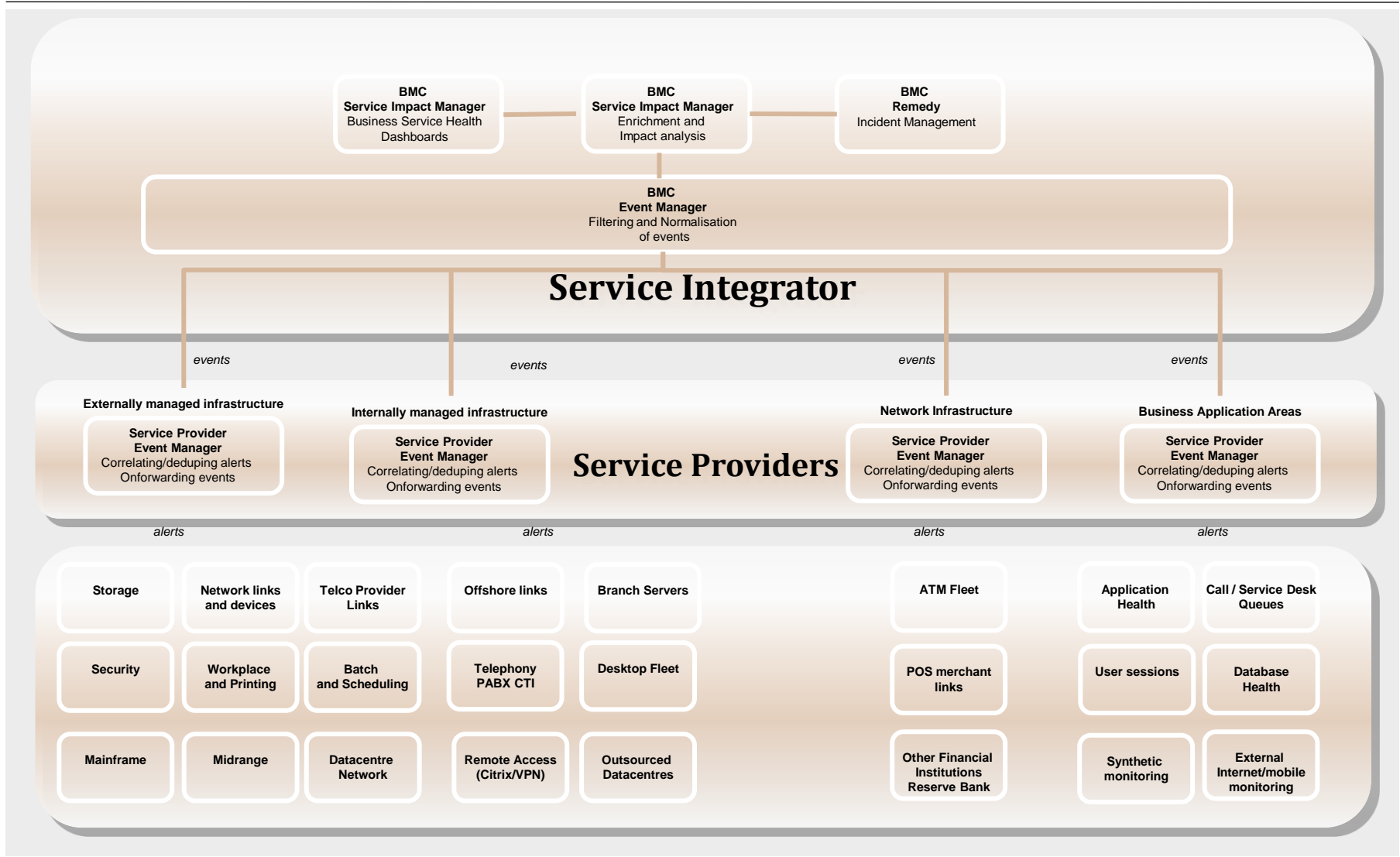


# The Event Management stack is divided into 3 levels

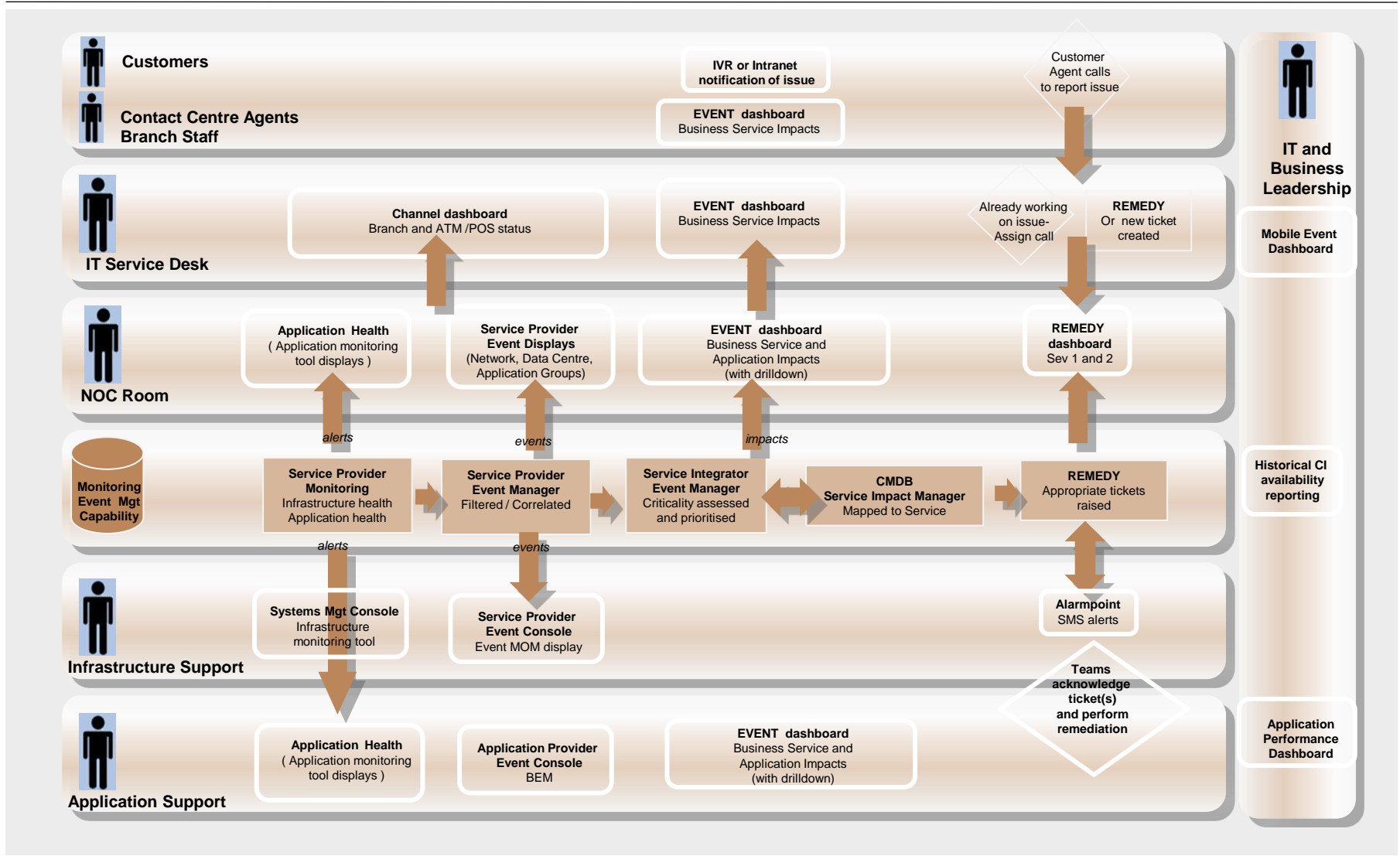




# All Westpac's service providers are expected monitor and generate alerts into the Service Integrator Event Manager



# This provides appropriate visibility to all players and facilitates incident remediation



# Example of a top level dashboard presented from BEM



# Our journey

## Phase 1

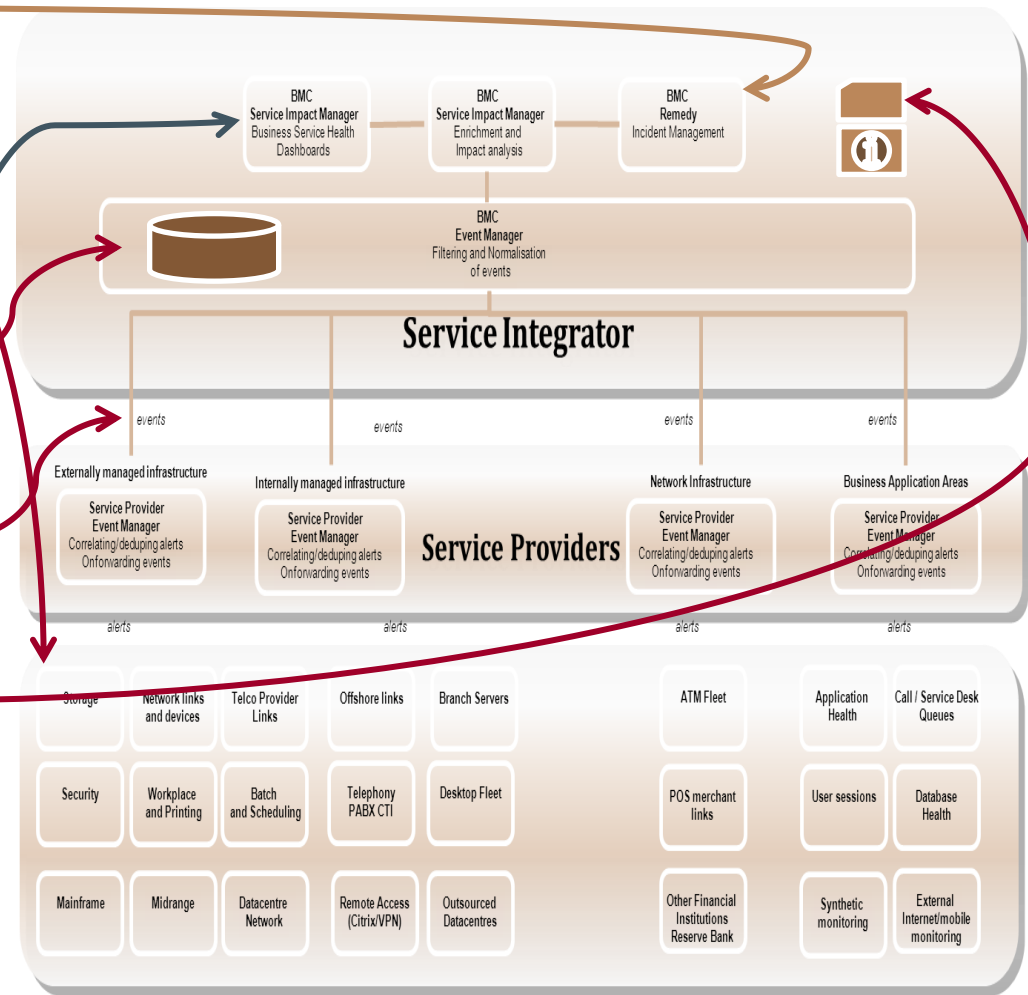
Consolidation of all service desks, flight decks, operation centres and support teams, onto one tool suite for incident, problem and change.

## Phase 2

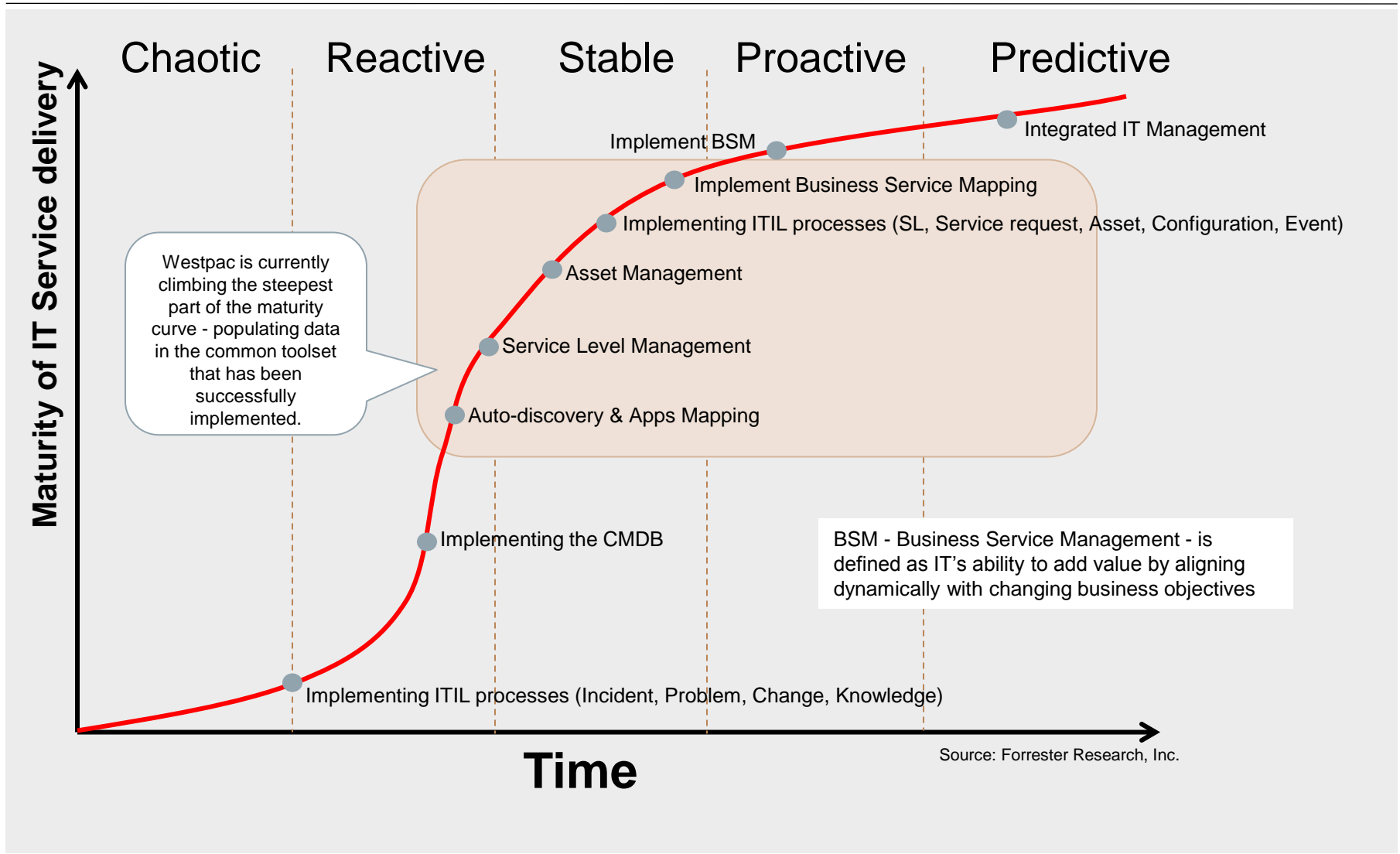
- Project established to review, upgrade and roll out consistent monitoring toolsets across infrastructure landscape.
- Population of CMDB with CIs by tower and business area, initially manual high level then followed by auto discovery.
- Implementation of Event Management capability and commencement of integration of alerts by tower and business area.
- Auto-ticketing and alerting of incidents from central event manager ( rather than monitor)

## Phase 3

- Business Service mapping in CMDB for critical services and platforms
- Real time Service Impact dashboarding
- Mandatory CI impact analysis and update as part of change approval process



# Our position on the BSM Maturity S-Curve

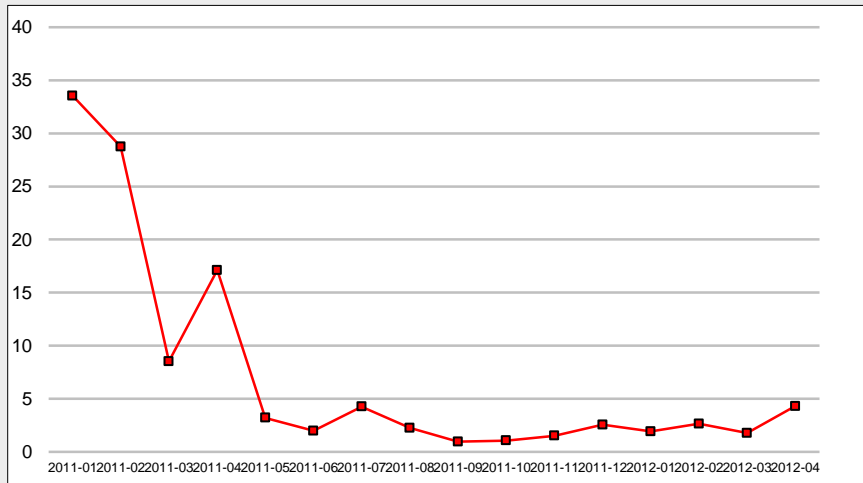


# Early findings

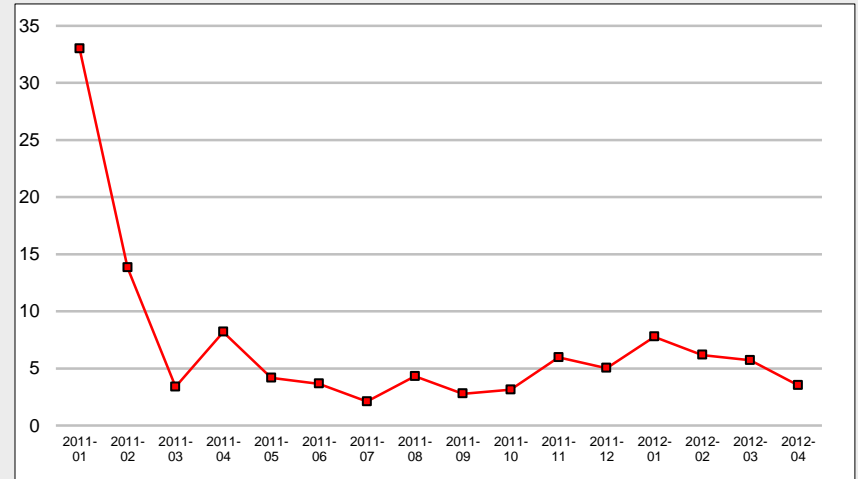
- The installation and rollout of monitoring agents across server fleets, devices and application is critical but time consuming and expensive.
- The setting of appropriate thresholds and de-duping, correlation and prioritisation of alerts before integrating events into the event management stack is complex. Get this wrong and you will be flooded with meaningless incident tickets.
- You will be surprised at what you find is happening out there. Your Service Providers may be worried.
- Dashboard tuning to remove false negatives and false positives may take some time and annoy your operations rooms as you bed this down.
- However it does not take too long for stability of the environment to improve with significant reduction in Mean Time To Restore (MTTR) for high priority events and Incidents attributed to change
- Productivity gains can also be achieved from auto-generation of Incidents which will increasingly replace manually raised tickets as the Configuration Management Database is fully populated.

# Greater stability of the environment with significant reduction in MTTR for Incidents classified as Priority 1s and 2s, and Incidents attributed to Change

Improved Mean Time to Restore for Priority 1s



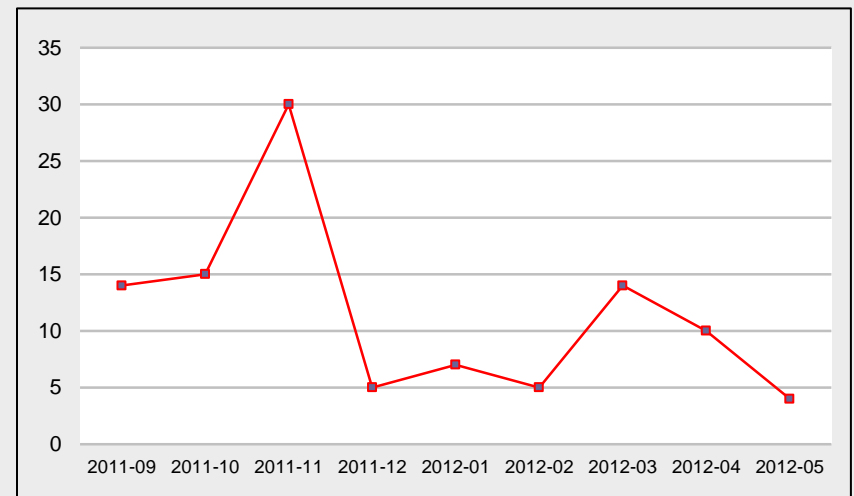
Improved Mean Time to Restore for Priority 2s



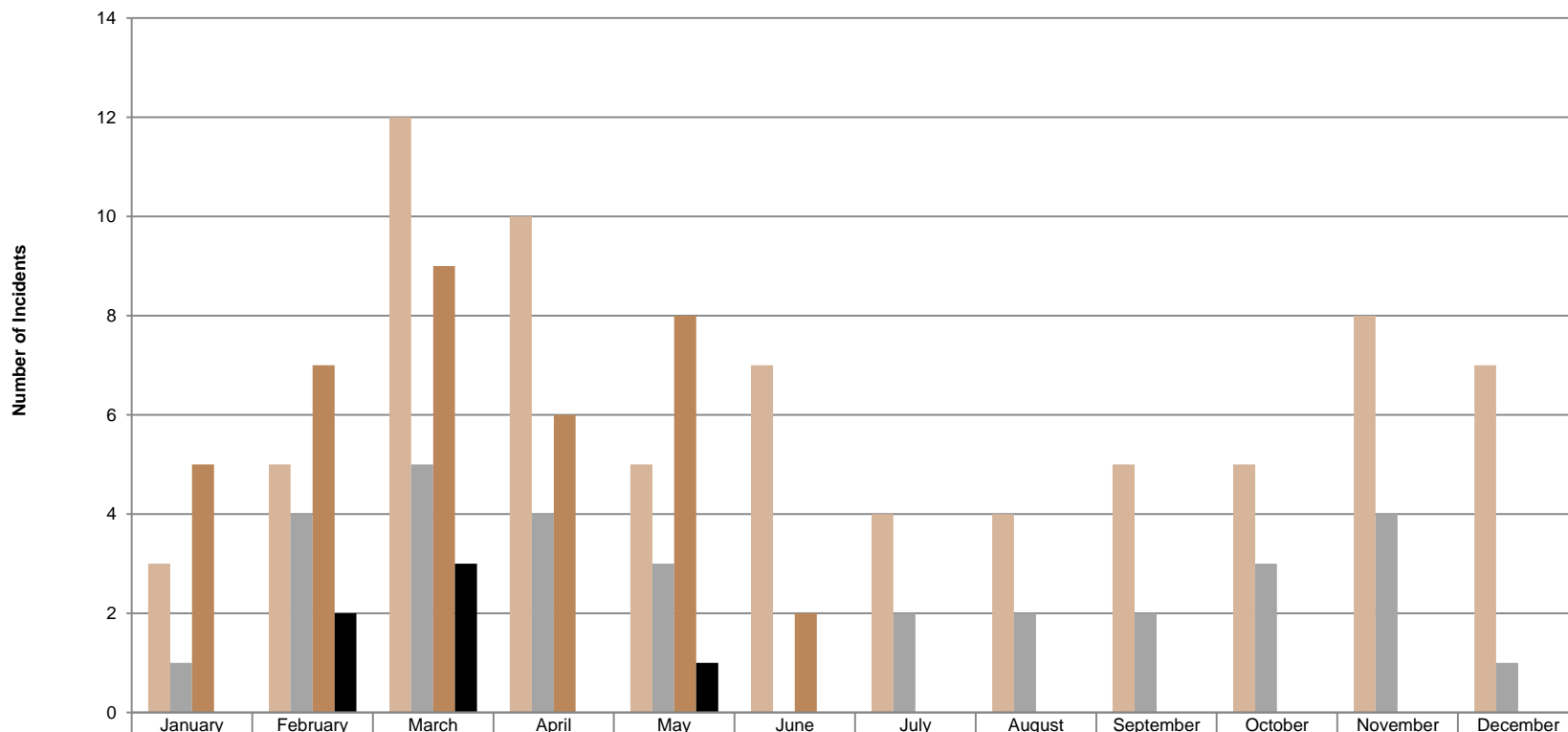
IT SD First Call Resolution up to 70+%



Reduction of incidents caused by changes



# Change Management – 2011 v 2012 Sev1 Change Related



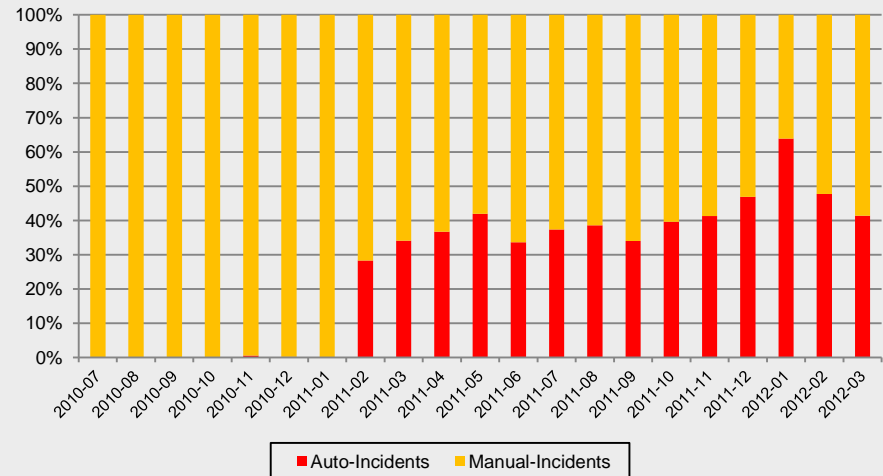
	January	February	March	April	May	June	July	August	September	October	November	December
Westpac Group Total Sev1 2011	3	5	12	10	5	7	4	4	5	5	8	7
Westpac Group Change Related 2011	1	4	5	4	3	0	2	2	2	3	4	1
Westpac Group Total Sev1 2012	5	7	9	6	8	2	0	0	0	0	0	0
Westpac Group Change Related 2012	0	2	3	0	1	0	0	0	0	0	0	0



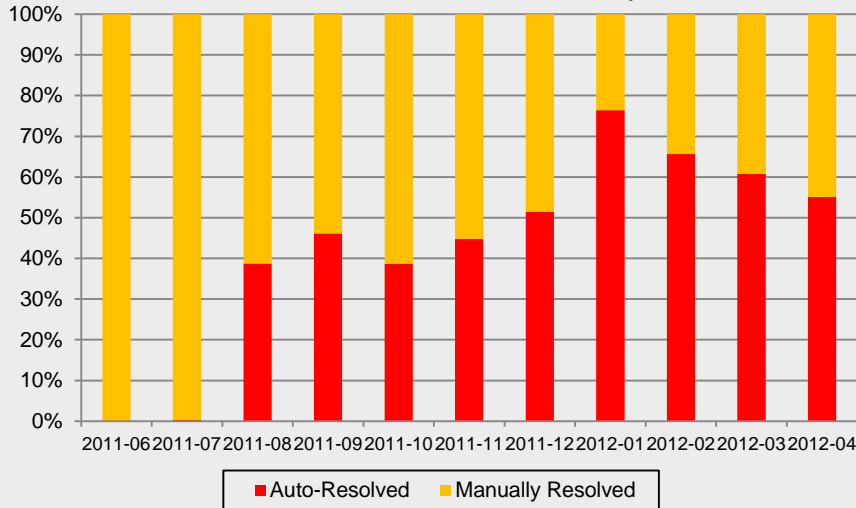
# Productivity gains are being achieved from Auto-generation of Incidents which will increasingly replace manually raised tickets

- Incidents being generated automatically from Event monitoring
- Auto-creation of CI Unavailability records for critical incidents.
- Increase number of incidents via Event monitoring that automatically update CI Availability for SLA reporting.
- Increase number of auto-resolved incidents via Event monitoring
- Increase ability to report trending on incidents at the individual CI (Asset).

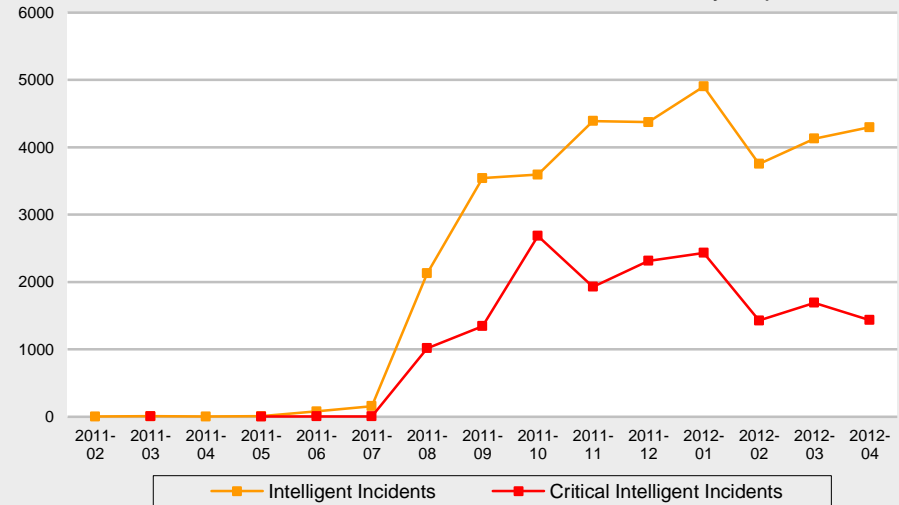
Auto-Incidents vs Manual Incidents (%)



Auto-incidents – Auto Resolved vs Manually Resolved

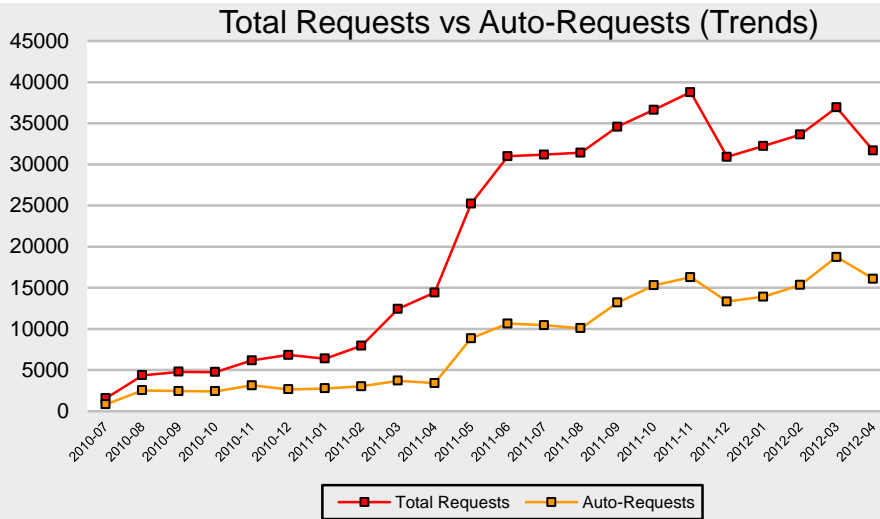


Incidents related to CI and Incidents with Availability Impact



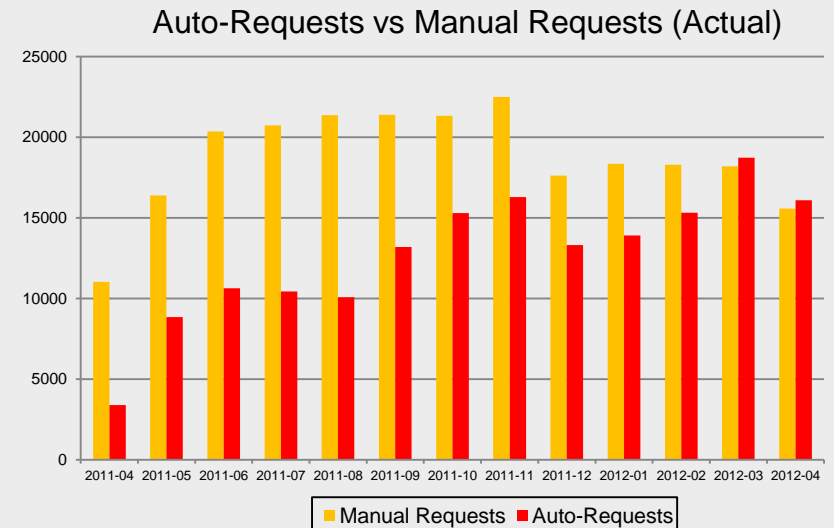
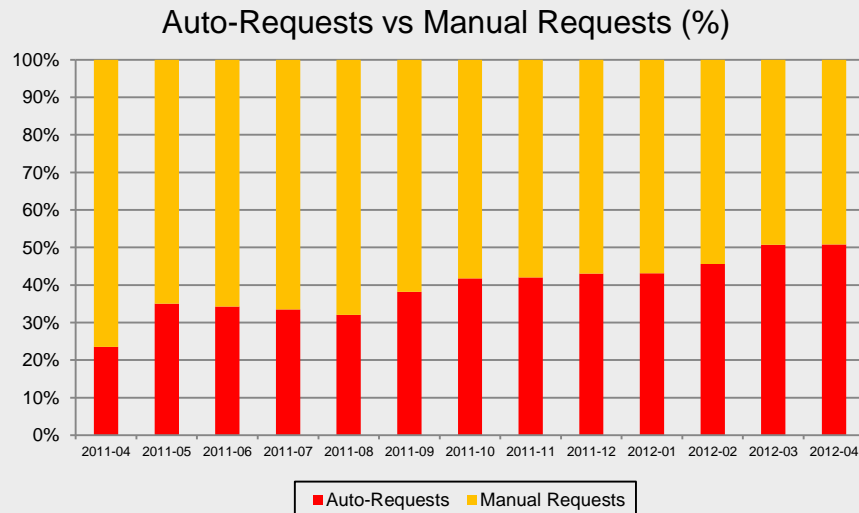
NB: Intelligent incidents = monitored device has a CI pre-loaded in CMDB

# Auto-generation of Service requests in Remedy which is reducing re-keying



- Percentage of auto-generated requests is now greater than manually keyed requests. Increase use of email and self service requests which uses automation to populate requests (>50% for March & April 2012). This is reducing demand on Service Desk for re-keying.

- Top 5 auto-requests:
  1. New request for Access to an application
  2. Modify access to an application
  3. Enquiry
  4. Password reset
  5. Application administration/ data configuration



QUESTIONS?