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**Welcome to Innovation 2009
IBM Rational Software Conference**



Making the most of your Enterprise's Tools

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BAE Systems Australia – Presentation Outline

- Who is BAE Systems
- Who is BAE System Australia
- Making the most of your Enterprise's Tools
- Lessons Learnt
- Engineering Project Pack



BAE Systems - global

- BAE Systems aims to be the premier global defence, security and aerospace company.
- 3rd largest global defence and 6th largest US defence company.
- 100,000 highly skilled employees.
- Global capability customers in more than 100 countries .
- Annual sales exceed £15.7 (34.8 AUD) billion while annual R&D spend exceeds £1.4 (3.1 AUD) billion.
- Operates six home markets.



Home Market Locations



BAE Systems Australia - overview

- Australia's largest defence company, following integration of Tenix Defence and Tenix Toll Defence Logistics.
- More than 50 years of operations in Australia.
- Headquartered in Edinburgh Parks, South Australia.
- 100 sites across Australia - major sites in Adelaide, Canberra, Sydney, Melbourne and Newcastle.
- Approximately 6,500 employees.
- Principal customer - Australian Defence Force (ADF).
- Annual sales FY2008 \$1.3 billion.
- Total capability across air, land, sea and joint environments.



Sector Statements

To be a leading through-life capability partner to the Australian Defence Force optimising Australia's defence across joint, maritime, land & air environments.

<p>JOINT: Build on BAE Systems' global C4ISREW capabilities to develop and support future Network Centric Warfare (NCW) capability for the ADF</p>		<p>MARITIME: Build on BAE Systems' successful supply, integration and support of naval weapon systems and sub-systems by delivering capability solutions for Australia's maritime defence, whilst pursuing export opportunities</p>	
	<p>AIR: Grow BAE Systems' lead position in the air sector by providing systems integration and sustainment solutions to Australia's current and future military air platforms</p>		<p>LAND: Build on BAE Systems' position as a global land platform, weapons and systems provider to deliver in-country capability in systems integration and support solutions to transform the ADF's land forces</p>

Making the most of your Enterprise's Tools



Challenges to the enterprise

- Thousands of tools available and in use
- Multiple versions of each tool
- Administration costs associated with each tool and version
 - Patching/upgrading
 - Keeping track of licenses
- Developing processes for an ever changing tool environment
- Deciding what do you centrally manage vs what do you let the projects manage
- People's "religious" belief that their tool is the best



Lessons Learnt

- Over the past 10 years we have been trying to address these issues – some successfully and some not.
- The following are some of the lessons we have learnt



Tools – How to get it Wrong

- Don't plan the rollout... and just leave it to couple of people to implement.
- Don't run a pilot program.
- Select a large program for your first rollout.
- Install all the engineering tools, presume all engineers are very smart and assume they will work out optimal methods for usage... how hard can it be?
- Have project schedules demand a rollout before tools have been tested and processes optimised and issues resolved.
- Become reactive and race around “fighting fires”.



Secrets to Success

- Don't think you can change the world overnight....
 - Keep your target milestones small and manageable.
 - Don't expect new out of the box tools to sell themselves just because you have aquired them.
 - Change takes time, planning and execution.
 - Most people are change resistant – it takes them out of their comfort zone.



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Secrets to Success

- Develop and understand the business requirements.
- Ask yourself the following questions.
 - Are one-by-one “best of breed” choices the right solution for your business?
 - Can you avoid double handling of information, duplication and data migration?
 - What is the optimal solution for your business?
 - Find the vendor(s) best equipped to meet your needs.
 - Do they listening to your needs?
 - Are they interested in resolving your issues?
 - Or are you just another account they need to grow?
 - What will happen to your licensing costs once you have committed to using one vendors tools?
 - Can you lock the vendor in for the long haul?



Secrets to Success

- Tailor your training to use your process
 - To assist familiarisation by users, establish training modules that will take them through using “your process”.
 - Introduce tool “features” at appropriate times during the training around your process.
- Select a small program for your first rollout (< 20 users)
 - This is essential as issues will arise (because nobody can anticipate every scenario) and it is easier to work through (or around) these with a small committed group.
 - You should be looking to groom the people from this initial rollout program into becoming the 1st points of contact on new programs.
 - Remember to measure; without measurements how can you analyse success or failure?
 - Remember to supply adequate support.



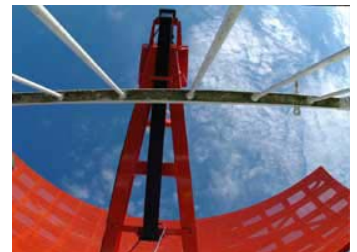
Secrets to Success

- Then you are ready for the big leap (>100 users)
 - Use people from successful deployments to take lead roles in new programs (adds incentive).
 - Empower these people to mentor others.
 - Have these people with experience placed in large programs to make them independent of a centralised Engineering Tools group.
 - Focus on growing an interactive community of users (who help each other).
 - Continue to collect measurements.
 - Remember to supply adequate support.



Secrets to Success

- Workbench your engineering tools and become familiar with them
- Get “process asset” owners involved early
 - Tailor work instructions to reflect how the tools should be used.
 - Consider modifying your process to match the tool rather than customise the tool to match your process.
- Once you have selected a vendor, get management “buy in” for the roll out process
 - They need to understand the business benefits, but also that these will not happen overnight. (cost v. benefit curve that correlates with growing user expertise)
 - Managers need to understand there will be “some pain” in adopting a new tool suite.



Secrets to Success

- Keep an eye on the future
 - The world does not stand still, you need to investigate and find methods to continually improve your systems and processes.
 - Don't assume that once a tool is in place that the job is done!
 - Work closely with the vendor, establish relationships, engage them with your vision (so it becomes closer to reality).
 - Having knowledge of what changes are “in the pipeline” allow you to make plans for the future.
 - Whether these be opportunities to be optimised; or
 - If things are not moving the way you want, what is your strategy?



Solution derived from the lessons learnt

- Engineering Project Pack
 - Product
 - A carefully selected set of software products to meet the needs of the business
 - Each product has only one version as part of the EPP baseline.
 - Tailored processes and training developed for each product.
 - Server infrastructure available across the major sites in Australia
 - Strategy
 - Roadmap for future activities
 - A development plan driven by the roadmap.



Engineering Project Pack

- Objectives
 - Create a Standard working environment for Engineers
 - Reduce the total number and versions of tools
 - Reduce maintenance and total cost of ownership of tools
 - Reduce training costs
 - Better cost predictions for future bids
- Benefits delivered to the business
 - Easier transition of staff from one project to another
 - Less ramp up time for staff joining the project
 - Same look and feel tools environment across the business



IBM Engineering Tools usage breakdown (not including casual users)

- IBM Rational Tools
 - Synergy – 250 users
 - Change – 400 users
 - Doors (all versions 5, 7, 8 and 9) – 300 users
 - Rhapsody – 30 users
 - System Architect - 20 users
 - Focal Point – 20 users
- Geographically spread across Australia

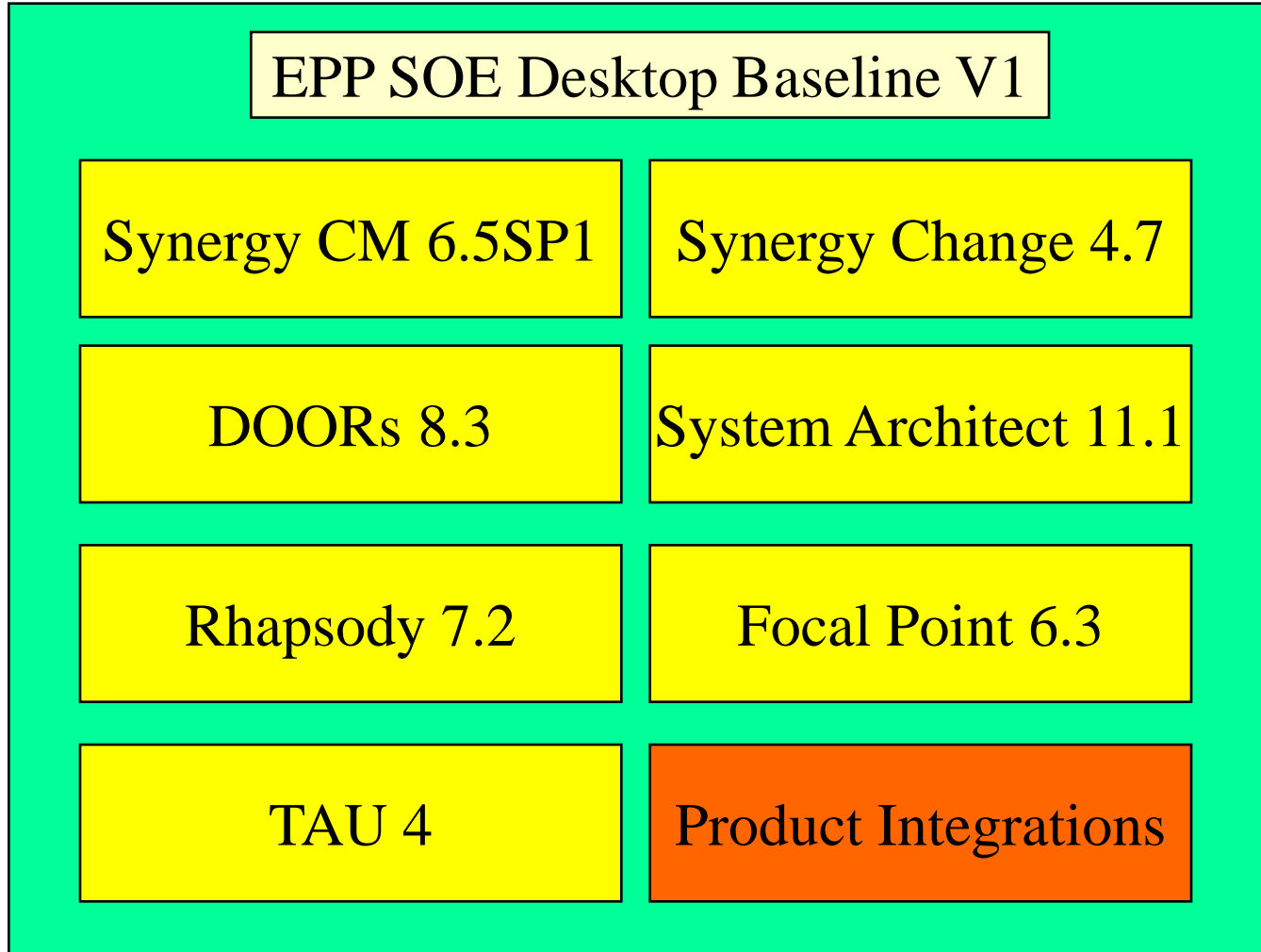


Engineering Project Pack (EPP)

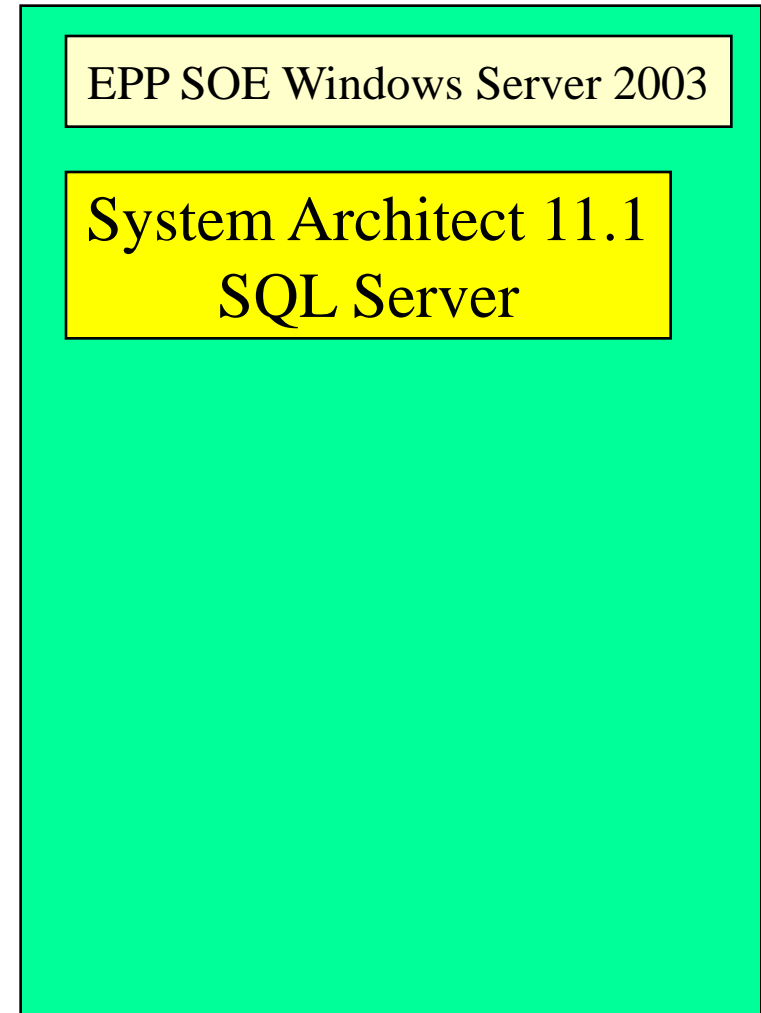
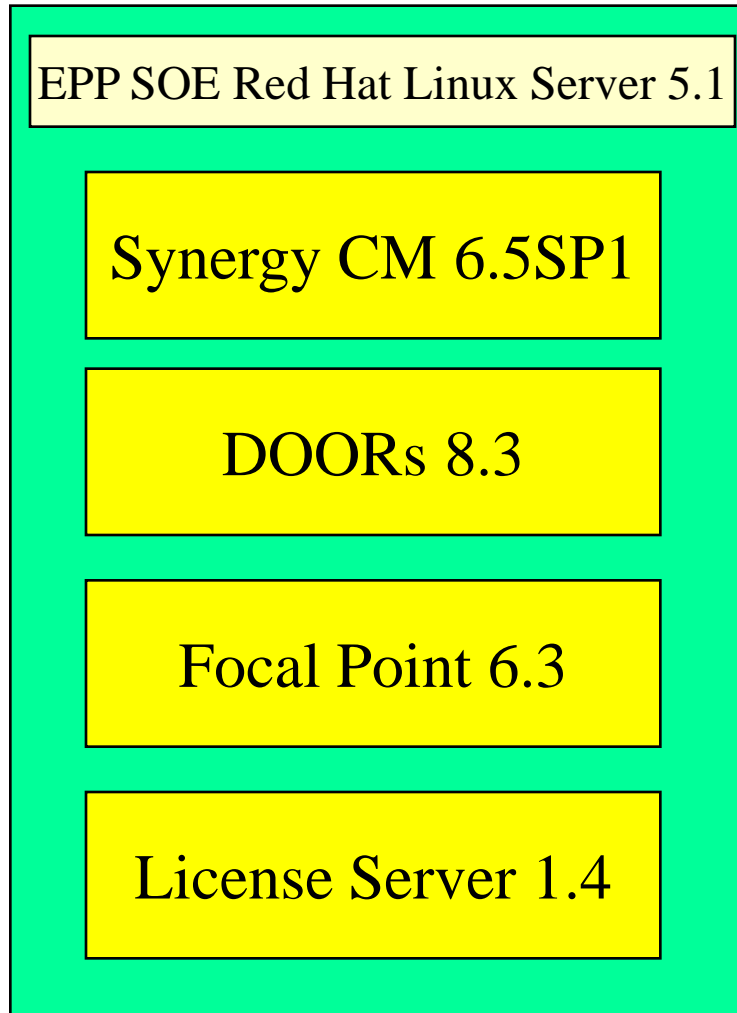
- Started by identifying which tools were likely candidates for EPP
- EPP V1 had to be complete within 12 months
- Decided which tools and which versions of the tools could be completed in the time frame
- Evaluated how the tools were best going to be hosted in our environment
- Created the first baseline of tools for EPP called EPP V1



EPP V1 – “The Product” baseline



EPP V1 – Server OS Infrastructure baseline



Engineering Project Pack

- Each tool within the EPP will have the following
 - Budget allocated
 - Hardware infrastructure available
 - Deployment instructions (installation guides etc)
 - Training courses
 - Work Instructions
 - Roadmap towards which tools and versions to use in the future
 - Staggered 12 month review of each tool version to determine if patching is required or if newer versions should be included in future baselines

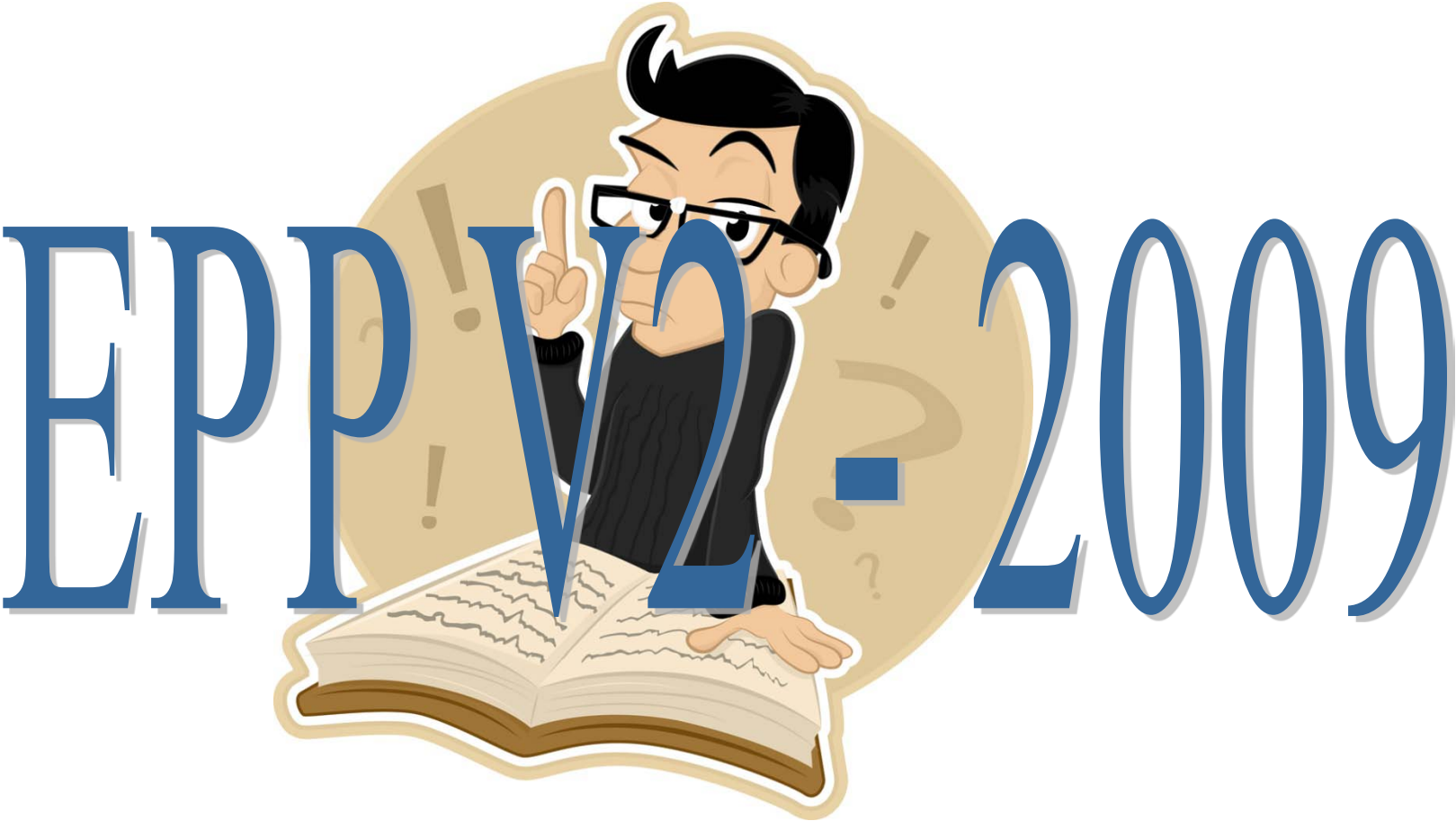
EPP V1 – The first attempt - 2008

- Currently across the company each of the tools in EPP V1 had multiple versions in use across the company
- Pilot project just starting was used to test the new versions
- Primary focus after the pilot was to upgrade all of the tools to the EPP version
- This provided consistent installs across the majority of the company

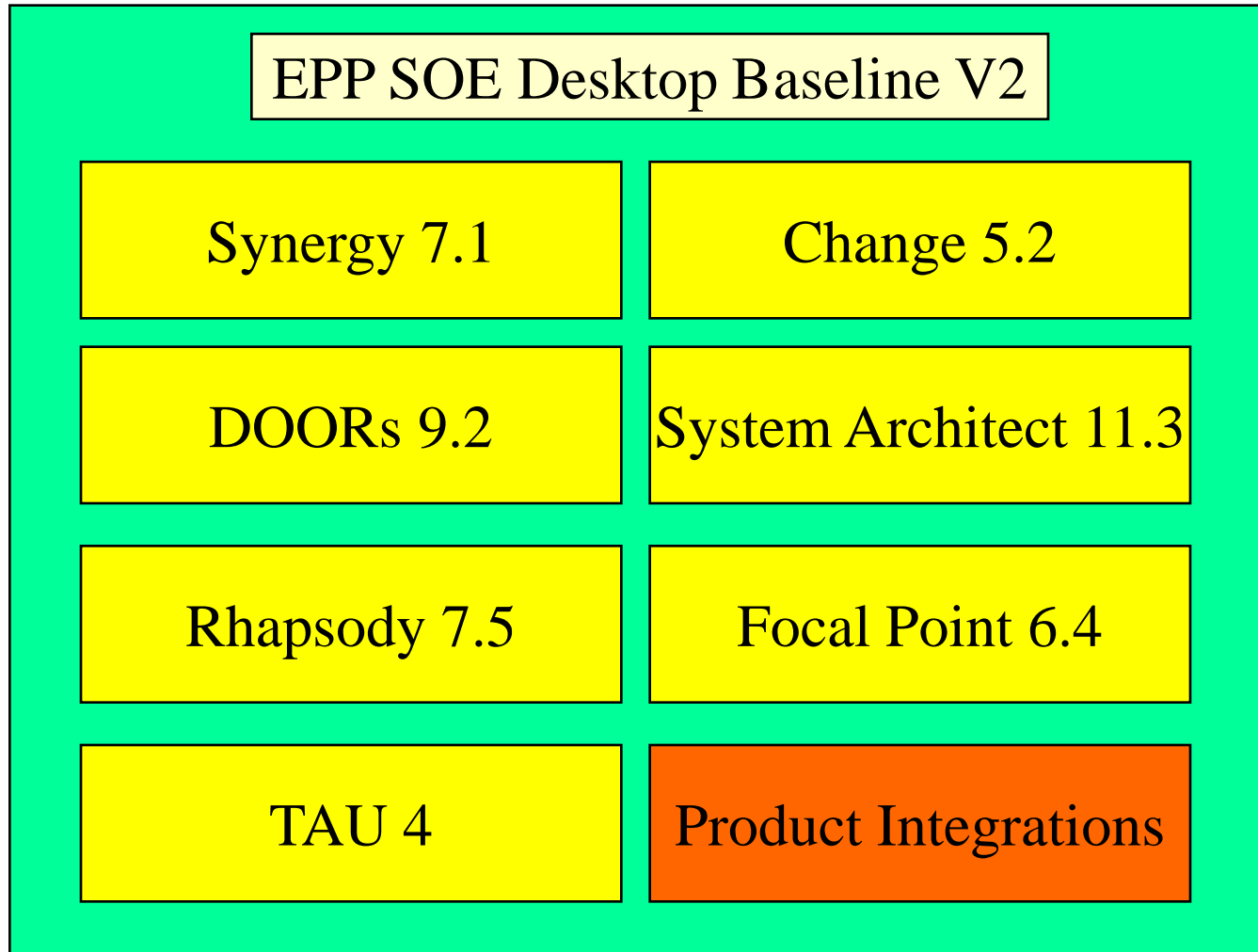
EPP V1 – How did we go?

- Not all objectives met in EPP V1
- Processes were not consistently developed
- Not all of the servers were setup on Red Hat Linux some were still Solaris
- Training courses were available but not tailored for our processes

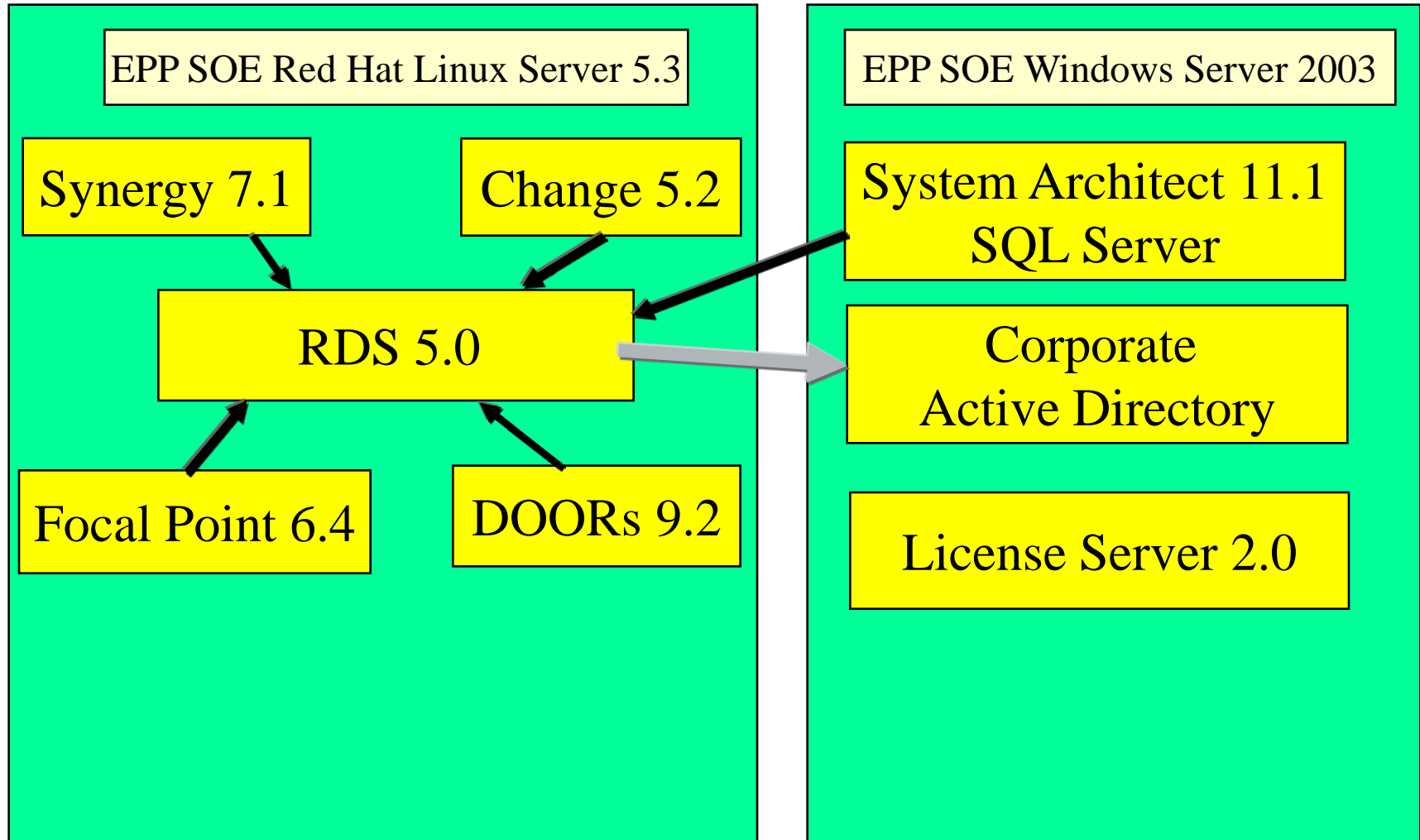
Where to now?



EPP V2 – “The Product” baseline



EPP V2 – Server OS Infrastructure baseline



EPP V2 – Where are we up to?

- Scheduled to be completed and rolled out at the end of 2009
- Servers are currently being rolled out to majority of the sites
- All servers are consistently built as per the EPP V2 instructions
- Training courses are currently available for most product and are currently being converted to e-learning courses
- Processes are still work in progress
- Migrating EPP V1 products to EPP V2 is still work to go

Future Directions?

ERP V3 2010



EPP V3 - 2010

- EPP V1 and V2 focussed on server infrastructure
- EPP V1 and V2 has on demand desktop applications installed
- EPP V3 will focus on creating and deploying standard engineering desktop where EPP tools are installed and configured by default
- Exploring thin desktop infrastructure such as VmWare VDI solutions

What about tools that are not in the EPP baselines?

- Apply the EPP objectives where appropriate
- Look at adding tools to the EPP baseline over time

Beyond 2010?

Project Pack



Project Pack – 2010 and beyond

- EPP only focused on Software and Systems Engineering Tools
- Project Pack will look at Mechanical, Electrical, PM, Finance tools as well as the EPP tools.

Conclusion

- Managing tools across your enterprise is not easy
- Failing to try and manage your tools will lead you to a messy and potentially costly situation
- By considering the lessons we have learnt you can save yourself a great deal of heartache and have more successful rollouts for your tools
- EPP concept does not solve all of the issues however it gives a building block to start from

Any Questions



BAE SYSTEMS

REAL CAPABILITY. REAL ADVANTAGE.

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