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Session 3: Human Resource Capacity Development

Mindset and Attitude Readiness – is it really important?

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(Thursday, 8th September 2005, 8.15am – 10.00am)

SESSION 3 - Human Resources Capacity Development

- Mindset and Attitude Readiness – Is It really Important?
 - Share BSP’s experience on the importance of mindset readiness in ensuring success of automation and computerization
 - What are the stumbling blocks and how to solve them. What are the CSFs?
 - Is it employer’s responsibility to train its staff? Or the staff responsibility to train themselves
 - Is it easier done in the private sector than government?

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Information Management and Technology in BSP

- 250 IT staff
- Computerisation/Automation journey:
 - 1960s: Started with finance systems/machines, analogue simulators
 - 1970s: Main frame computing
 - 1980s: Mini computing, rapid growth of discrete business applications, corp email.
 - 1990s: Distributed servers & Desktop computing
 - 2000s: Integration of applications/systems, Real-time systems.
 - 2004: ERP
- 200 servers, 50 Tera byte storage capacity, 2600 Desktops /workstations.
 - MS office suite
 - Specialist applications
 - Real time systems(system integration)
 - SAP (Maintenance, Projects, Procurement, Finance)

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Purpose/Scope of Automation and Computerisation

- The purpose :
 - Productivity improvement
 - Speed and availability of information
 - Data and process integrity
 - Enhanced communication
- The scope :
 - Data capture, Processing, storage and reporting
 - Numerical simulation of complex problems
 - Data/information visualization
 - Business process/governance and control as in ERPs(enterprise resource planning systems).

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Oil Industry – IT at the core at every phase

- Priory to discovery,
 - IT provides the tools to converts masses of raw seismic data into underground landscape for exploration evaluation
- In a new discovery,
 - IT provides the tools to assess the best options to extract the hydrocarbon resources.
- In a depleting oil field,
 - As we produce more oil from the underground reservoir . .
 - More data and information becomes available to characterise the oil field,
 - The less oil is left for future development
 - The more difficult and costly(more technologies call to play) to extract the remaining oil – law of diminishing returns applies
 - More analytical effort is required to reduce the risk of failing
 - The more we have to rely on IT to manage information and reduce risk.

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Mindset and Attitude – Numerical Simulation

- Numerical Simulation of complex processes, e.g simulation of oil and gas recovery processes in the reservoir, simulating the flow of liquids in complex pipe systems.
 - The physical processes are translated into mathematical models for processing.
 - Enables the study of the best solutions before implementation, and tracking progress during execution.
 - Enables assessment of multiple scenarios of development/operations that would otherwise not possible due to technically inadequate alternatives.
 - It saves cost by reducing risks.
- It has a risk of inducing remoteness from reality.
 - The skill of the knowledge worker here calls for a lot of creative thinking in defining realistic options.
 - It requires a good feel of physics to judge if the results from the machine are plausible.
 - Artifacts of mathematical simplifications or inaccurate details in the model can at times give anomalous results that can lead to expensive wrong decisions.
- The mindset of not blindly accepting what the computer tells you is key. There is always need to calibrating with expectation based on conceptual physics and commonsense.

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Mindset and Attitude - ERP

- Enterprise Resource Planning (ERP) systems like SAP presents a different set of challenges and opportunities to staff.
- Features of ERPs:
 - Automates numerous business processes to support an integrated business entity.
 - A single internally fully consistent database. ERP databases are a valuable source for information to monitor business performance at all levels of detail.
 - The integrated workflow in ERPs also demand synchronized actions from users. The number of users can run into 1000s with a wide range of roles.
 - Business controls functionalities that track all transaction in detail (user password is equivalent to signature).
- Working with an ERP requires an “enterprise first” mindset, i.e. the company “first” rather than about user friendliness. It definitely is not user friendly, its business friendly!
 - A mindset of compliance to process and procedures is required
 - Users have to accept that the meticulous data input need not necessarily benefit them directly. It often benefits the enterprise as a whole rather than individuals who have entered them.

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Mindset and Attitude – Real Time Systems

- Real time systems or Digital oilfield has started driving the next evolution of the oil industry.
 - This is riding on the back of ICT.
- Fully integrated flow of data from remote facilities to decision makers is made possible
 - Time to live data shrinks from days to instantaneous.
 - Control of facilities is at a mere mouse click.
- What new mindset does the staff need to adopt with this new power to harness its benefits?
 - Enhance team working is key to faster/better decisions to support actions.
- The expected net benefits are safer, more efficient and higher production.

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Mindset and Attitude – IT Security

- Computerisation and automation has enabled easy flow of information within and outside organizations.
- The value of information varies widely ranging from the absolute useless to the ultra-strategic.
- The ability of staff to exercise data protection measures requires an awareness education in IT security.
- Locked drawers and cabinets are replaced by passwords and procedures.
- A security breach can be damaging to credibility and costly.
- IT security audits should be a standing feature in the audit calendar.
- BSP IT staff provides IT security audit services to the many Shell operating units around the world.

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Mindset and Attitude – Assessing the Benefits of IT

- **IT** facilitates the **Mind** to “crystallize” **Knowledge** from **Data and Information**.
- The **Power of Knowledge** is in the **Action** (Confucius, ~ 500 BC)
- **Action** realises **Value**.
 - Often most of the value is attributed to the effort/resources required to implement the action.
- The part of the value attributed to the Mind (intellectual capital) is usually very subjective.
- The part of the value attributed to IT is not only subjective but often also overshadowed. IT is often wrongly seen as a cost item only.
- IT does play a key and inseparable part in value creation.

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Mindset and Attitude – Overall on Automation and Computerisation

- Automation of Data capture and processing has free up more time for analysis of data/information analysis, monitoring and control.
- This change is quite attractive as it is an upgrade of job content- taking away the mundane work.
- Has introduced new world class skills/technologies
- The staff has responded positively, affinity to IT was never an issue.
- BSP is among the leaders in the Shell Group in several areas of IT applications in the business.
- Accelerated IT literacy in the community

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**Is it employer's responsibility to train its staff?
Or the staff responsibility to train themselves?**

- Personal productivity tools (MS office, email, internet) – train yourself
- Industry specialist software – Company will train you
- The training of knowledge workers actually starts in schools.
 - Cultivating reading skills and habits
 - Computer stores and reading transfers to the minds
 - Need to scan-read for key info only, from the masses of material available.
 - Awareness increases curiosity. Curiosity creates hunger for knowledge
 - Analytical/problem solving skills
 - To Crystallize knowledge from information/data
 - Communication skills
 - Transfer/sell ideas/knowledge in many forms

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