Supplementary files are available for this work. For more information about accessing these files, follow the link from the Table of Contents to "Reading the Supplementary Files".

Information Systems Implementation, Change Model

Samantha Rockey

Helen Mastrantonis, Denise Smith, Darryl Wright

South African Breweries (SA)

PO Box 782178, Sandton, 2146, South Africa

Phone Number (27) 11 881 8743

Fax Number (27) 11 881 8746

Email: Samantha.rockey@sabreweries.com

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1. Executive Summary

This paper describes how systems thinking provided a framework for the development of a Systems Implementation Change Model. This model was used for the implementation of SAP Human Resources in South African Breweries

2. Introduction

There is no question that the rapidity of change and impact of this change is the major driving force for businesses today. Nowhere is this rapidity of change more apparent than in the world of Information Systems implementations. Driven by factors such as cost savings, turn around times, increased competitiveness and a requirement for information systems to follow business strategy, businesses need to focus on sustainable information systems that become entrenched quickly and effectively. Information Systems Implementations are notoriously techno-friendly and notoriously business unfriendly. As the linkage between the business strategy and the chosen Information System becomes more apparent, business need to find an Information Systems implementation model that goes beyond merely a technical implementation but rather focuses on the business as a whole.

A global imperative

South African Breweries (SAB) has, over the last seven years, undergone a number of structural and strategic changes. In 1994, SAB embarked on an aggressive mergers and acquisition strategy initiated after South Africa's re-entry into the global arena. SAB International was launched with acquisitions and mergers taking place in China, Eastern Europe and Africa. In 2001, SABI profits accounted for 43% of the groups overall profits enabling growth despite a reduction in volumes by 5% in the local market. In keeping with the globalisation strategy, the company listed on the London Stock Exchange in March 1999, effectively making it a London based company although it is still Head Quartered in South Africa.

Linked to the company's globalisation strategy came a business necessity to re-evaluate all business practices and to become a more effective operator in every sphere of business or risk being sidelined by global competition. A result of this business necessity was the downsizing of the local workforce from approximately 12, 000 employees in 1991 to less than half, 5, 000 employees in 2001. Attached to this process of downsizing was a concurrent process of upskilling the required workforce and this 10-year period has seen a significant increase in skilled employees and the outsourcing/ reduction of semi-skilled, unskilled employees. This process, along with a commitment to World Class

Manufacturing, an Integrated Management Process and Functional Integration[1], has been key in giving SAB a competitive lead in their core business of beer production, and currently SAB remains the lowest cost producer of beer in the world.

Revision of Human Resources Function

This phase of global expansion was accompanied by the strategic integration of the support functions such as Finance and HR. Prior to Functional Integration, the HR function was both bloated and non-strategic. In addition the service offered to the business was mechanistic and input driven. To support this function, a large number of HR practitioners were employed to provide specialist services such as Industrial Relations, Payroll, Training or Recruitment and so on.

This approach to HR operated in direct contradiction to the Integrated Management Process (IMP) that had been rolled out in early 1991. IMP, as it is referred to in the business, was introduced to SAB as the "way we manage people". IMP expected line managers to establish good management and HR practices while encouraging self-management and development. Managers were required to assume line responsibility for functions such as Business Planning, Goal Setting, Communication, Performance Management, Career Development, Training and Development needs and Time Management.

In keeping with the IMP approach, it soon became inevitable that the victim would be the HR function, and in the mid 1990s, SAB underwent a process of Functional Integration. Together with IMP, the Functional Integration process succeeded in consolidating the role of the line manager from an HR perspective. A key line manager role became *managing people up and down the HR value chain.* Line manager's were expected to manage all aspects of their employee's productivity, performance and development and were expected to consult with HR personnel only for deeply specialist HR services. The Human Resources function reported into line managers for this purpose and HR departments were disbanded.

The effect of such a radical overhaul of HR in a company like SAB was huge. Without the traditional HR practitioner collecting and maintaining information, and with the ever-increasing work pressure on line managers, the ability to collect and process HR information *effectively* became eroded. In addition, the data that was being collected was not being used to drive the business strategy, as for the most part, it existed in disparate pockets throughout the organisation. This led to a loss of

[1] Functional Integration refers to the process of ensuring line manager's are accountable and responsible for all areas of management, including Human Resource Management and Financial Management

organisational memory in the area of HR and people information as well as preventing the business from accessing real time HR information essential to the business goal of strategic people resourcing.

These reasons drove SAB to seek a business solution that would meet the following criteria:

- Provision of an integrated HR information system (part of the SAP Enterprise Architecture), that would cover the spectrum of compensation, organisational structures, competency development, recruitment and selection, industrial relations, career development, time and attendance and so on;
- The provision of IT-based support to the HR community and line managers, with the intention of entrenching / optimising post-Functional Integration Process roles and responsibilities;
- The provisions of a better balance between divisional standardisation and regional flexibility;
- Ensuring standardised policies, procedures, and reporting systems - in line with legal requirements and best business practice;
- Allowing line managers to take on additional responsibility for human resource management without being impeded by the legacy information systems that operated throughout SAB. These legacy systems were often stand alone, 'home – made' systems that were not integrated and required ongoing duplication of data capture;
- Savings to the business through the reduction of duplication of activities, streamlining of core functions and removal of non value-add activities from the business.

In response to the business case described above, a decision was taken to implement SAPHR (Systems Application Processing[2] – Human Resources) in SAB.

[2] SAP is an Enterprise Resource Programme (ERP) that is comprised of multiple modules, spanning all aspects of industry and commerce.

3. A Systems Dynamics Framework

The implementation of SAPHR in SAB was viewed as a major change initiative. At a cost of $4 million and a potential impact on 5000 employees, the implications were immense. It was recognised from the outset that the impact of SAPHR would extend to all areas of the business, not just HR. Once the SAPHR implementation was seen as an organic process and part of a broader business change initiative, the implementation model was framed in those terms. The implementation model developed, over time, into a Systems Implementation Change Model (SICM). Currently this model is used for all systems implementations in SAB (South Africa). The model was based on a number of Systems Dynamics assumptions:

- Organisational change can best be viewed as a relationship between structure, strategy, systems, style, skills, staff and superordinate goals and that viewing any change within a certain area of an organisation in isolation without simultaneously assessing the impact that the change has on the other areas can result in the change initiative failing. In addition, this model indicates that change in an organisation may be initiated by change in anyone of the seven areas. Waterman, Peters and Phillips (1980). The SICM focuses on an integration of the 7 areas through, among other things, cross-functional teams, feedback loops, using key organisational culture hooks and ensuring that the strategic intent of the SAPHR implementation was translated into the superordinate goals of the HR function.

- Small, well focused actions can produce significant, enduring improvements if they are in the right place (Senge, 1990). The SICM uses the principle of 'leverage', namely dealing with a difficult problem with minimum effort to lead to a sustainable improvement. The model does this by viewing the change required as an ongoing process, rather than as a series of once off interventions.

- A static model cannot be applied to an implementation that takes a period of time. Due to the ever changing nature of the system in which any implementation takes place, continuous reengineering of the implementation is critical to ensure relevance and ongoing value add. In this instance, simulation was achieved using the SICM in a series of pilot sites and then reengineering the SICM to respond according to alterations.

- Change initiatives often fail due to a mismatch of understanding between executives and employees. It appears that often the real benefits of change in the form of improvements and rewards of achieving these, are only seen by company executives. Employees who do not have

access to the corporate level strategic picture only see change initiatives as disruptive intrusions to their current (comfortable) way of operating. Strebel (1993) posits that companies and employees have reciprocal obligations and commitments that define their relationship with one another. These are termed 'personal compacts'. These are formal, psychological and social contracts that currently exist between company and employees. In order for change initiatives to be successful, interventions need to be designed to address all three aspects of the 'personal compact'. The SICM incorporates this understanding into the comprehensive and ongoing communication plan developed for the pre and post implementation phases.

- Organisational and managerial culture and behaviour can act as either a facilitator or inhibitor of change (Schein, 1985). Schein (1985) argues that in order for true cultural change to take place in an organisation, individuals have to 'unlearn' much of their previously held beliefs and behaviours. According to Schein, there are two ways that this change can be achieved. The realisation that change is imperative in order to survive is termed 'survival anxiety'. This type of anxiety must exceed the fear of the unknown or 'learning anxiety' in order for change to take place. This can be achieved by both increasing survival anxiety and decreasing learning anxiety. Survival anxiety can be increased either by explaining the business urgency for the change (what Kotter terms " the burning platform for change") and/or by of decreasing learning anxiety by providing plenty of training, coaching and general assistance to staff making the transition. Organisational cultural characteristics that are thought to facilitate change include: concern for employees, belief in the ability of individuals to learn and change, diversity within the employee group, frequent communication, belief in the value of team work as well as the availability of 'slack' or spare capacity during which time new behaviours can be experimented with and learned. On the other hand, cultural factors that are believed to inhibit change include a hierarchical structure, rigid job functions that are task oriented as well as a myopic management approach. The SICM incorporated this assumption by:
    - Ensuring that the 'burning platform for change' was articulated throughout the implementation (including the pre- and post- phases) and continues to feature in all SAPHR communication;
    - The SICM used the SAB culture 'hooks' to ensure ongoing compliance with the implementation.

- There is a "change" threshold where change initiatives can actually destroy the fabric of a company's capabilities to be successful if they exceed the company's capacity for change (Christenson and Overdorf, 2000). During the SAPHR implementation, the capacity for change

was continuously assessed via the feedback loops, pre and post analyses and daily team meetings. In those instances where it was felt that a change intervention was counter-productive, an reengineering of the model took place;

- Change initiatives often fail due to the managers failure to view change as a complex and integrated process that impacts on parts of the organisation that are ostensible unconnected. With regards to communication, Duck (1998) argues that 'everything managers say – or don't say – delivers a message' p.61. By not communicating during a change process, managers are sending a powerful message to employees that is felt just as strongly as if they had actually told their employees that their opinions and contributions were not valued. In contrast to many other change management practitioners such as Kotter (1985), Duck (1998) argues that action is more effective than talking in bringing about lasting change and suggests that preliminary steps designed to change attitudes are ineffective in overcoming resistance to change. It is only through experiencing the success of changed behaviour, that the attitudinal support for the initiative will follow. Duck is quick to point out that sufficient support must be made available to employees in order for them to implement the change initiative. The SICM built in support via a helpdesk, the set up of regional teams and the establishment of a Request for Service (RFS) process at the centre.

- Effective change initiatives continuously reassess assumptions based on the "ladder of inference". Argyris (1982) suggests that organisations trap themselves in defensive routines based on existing mental models. The SICM continuously tested assumptions through feedback loops, pre and post implementation analyses, a staggered rollout plan and a comprehensive communication plan.

- Leaders and champions of the change need to be educated around the change process before any change initiative begins. In addition, awareness of the impact on the entire 'system' rather than attempting to change only one part of the system is critical. (Sparks, 1993). The SICM included a robust change management team given the responsibility to manage the change management process. A key goal of the change management team was to pass on appropriate change management skills to the other members of the implementation teams.

- The importance of a change process that 'links' the various components of the change initiative. Failure to implement any one of these components could result in the entire change initiative failing (Kotter, 1985). The SICM is based on Kotter's (1985) eight process steps

required for a successful change intervention and is cogniscent of the possible eight errors outlined by Kotter (1985) that may occur during a change intervention.

4. Learning from Past Mistakes

Prior to SAPHR, SAB had seen the implementation of a range of new information systems. Typically these implementations all followed a similar model.

1. The IT department drove all information systems initiatives. The IT department led the process in terms of proposing business solutions, developing and implementing the system and constructing the measures.
2. Training was provided by the IT department and was focused exclusively on the development of system competencies.
3. The success of the implementation was measured against input criteria – e.g. How many people had attended the training and how many people had logged on to the system

The qualitative elements of a systems implementation were sidestepped and the easier to measure, more apparent quantitative elements were focused on. Until the advent of the original SAP implementation, this model continued to be reinforced almost by default. The results of not focusing on the qualitative aspects led to the following:

1. Inability to create grip with the system as the system and processes are not entrenched, anchored and utilized properly;
2. Inability to capitalize on the potential business benefits
3. Inability to create groundswell with the system – a few small pockets remained committed to the system while the rest of the business lost interest or shifted their attention to other projects.
4. Loss of benefit from the Information System over time as the required re-alignment of the Information System to the supra-system never took place. The Information System was located in a specific point in time and space and did not reflect the organic changes taking place in the business.
5. End users never realize the competence required
6. Support mechanisms are often superficial and vague
7. There is no consequence management if users do not use the system optimally.

If this occurs, a performance dip is reached. This jeopardizes the business's ability to gain any real benefits from the system implementation. In addition, under utilisation or incorrect utilisation of a system will nullify all benefits put forward in the business case. To ensure that this performance dip does not decrease substantially, an equal focus on the post implementation phase is required.

Lewis (2002) adds to this by stating that the general causes of technology failure include:

1. Lack of high level buy in/ sponsorship
2. No clear vision of the goal
3. Inconsistent communication
4. Failure to recognise cultural impact
5. Failure to create manageable steps
6. Misalignment of business processes
7. Misalignment of HR practices
8. Inadequate training

It soon became clear that the problems described above were obstructing any real gains that may have been got from information systems implementations. Long term sustainability and continued usage of information systems is the major challenge of a large-scale systems implementation.

The model (SICM) described in this paper details a pre-implementation methodology that lays the groundwork for implementation. The SICM includes an implementation phase and post implementation methodology that facilitates long-term sustainability and usage of the system, thereby realizing a return on investment.

5. Consolidating a Systems Implementation Change Model

The model used in the SAPHR implementation is based on the Kotter (1985) change framework and the integration of system dynamics and thinking.

Kotter (1985) purports that the following are key success factors when implementing any new process:

- Establishing a sense of urgency/ crisis.
- Creating change infrastructure and capacity.
- Developing a 'vision', strategy and action plans.
- Communicating all of the above.
- Empowering broad based action.
- Generating short term wins.
- Consolidating gains.
- Anchoring new approaches in the culture.

These key success factors are enhanced through the following systems thinking understandings:

- Systems are characterized by innate diversity
- Systems are self organizing
- Systems are self-transforming
- Systems have self reflexivity

The SICM[3] extrapolates from these two streams of thinking and is designed to run in parallel to a set of information systems development processes – namely those processes required to construct and develop the information system application itself. While this model focuses specifically on the change management processes (i.e. those processes that impact on actual business changes/ requirements) reference may be made to the parallel information systems processes. This paper does not refer to this parallel set of processes. The SICM below however, does identify the parallel information system processes in italics.

It is important to note that the different phases *are not linear*. Rather they may happen simultaneously, or may even be left out all together. This will depend entirely on the nature of the system implementation (potential impact on the business, scope of users, timing, budget constraints etc).

[3] Please note that any Information System Implementation can also be divided into three phases: namely the phase prior to the roll out of the system, the phase during the roll out and the phase directly after the rollout.

The model described includes all the success factors and if utilised correctly should ensure that the pre and post implementation phases of a systems implementation project contributes to an effective long-term implementation. The plan that emanates from the model should be used in conjunction with the actual project plan and once a plan of action has been determined that includes regional variations/ requirements, the implementation plan should ideally be built into the project plan.

Systems Implementation Change Model

CHANGE MANAGEMENT PHASE	KOTTER FRAMEWORK	SYSTEM THINKING COMMITMENT	BUSINESS PROCESS *Application Process*	KEY ACTIVITIES
Pre-Implementation: Creating an Environment for Change Aim: to establish a sound and solid basis for implementation	Creating a sense of urgency or a burning platform for change	Understanding the link between structure, strategy, systems, style, skills, staff and superordinate goals (Waterman, Peters & Phillips, 1980)	1. SCOPING *Scoping and Visioning the Information System Application*	• Identify the 'burning platform' for change • Define and plan the Change Management Challenge • Agree the communication & training plan • Agree the roles of all the key teams
	Creating Change Management infrastructure and capacity	Perceiving and dealing with the organisation as if it were a system in which the change process is embedded and which the organisation is embedded within the environmental suprasystem	2. TEAM ORIENTATION *Design*	• Identify the issues requiring change • Identify 'out of scope' regional practice • Design data migration templates and processes
	Developing a vision and strategy	Building a shared vision (Senge, 1990)	3. INFORMATION GATHERING *Construction*	• Anchor the shared vision • Define interaction with regional implementation team • Schedule and conduct Pre Implementation Analysis
	Communicating the change vision	Managing the mental models (Senge, 1990) Ladders of Inference (Argyris, 1982)	4. SITE PREPARATION *Testing and Delivery*	• Conduct all User Acceptance Training • Implement training plan • Conduct PIAs
Implementation: Making the changes		Understand the complex nature of the system, suprasystem and subsystems. Use this understanding to reengineer SICM	5. STAGGERED IMPLEMENTATION *Usage*	• Stagger the roll out • Reengineer the SICM
Post-Implementation: Entrenching the implementation in the culture Aim: To develop, trial and implement new practices and to anchor new approaches in the culture	Empowering broad based action	Create a Learning Organisation (Senge, 1990)	6. BUSINESS ALIGNMENT *System Fixes*	• Implement formal feedback process • Continuously reapply Best Practice • Implementation sign off
	Generating Short term wins	Utilising principles of leverage (Senge, 1990)	7. ANCHORING *Reengineering and Usage*	• Roles and Responsibilities agreement • Second bounce and ongoing training and coaching • Identifying 'what needs to be fixed?' • Ongoing communication • Continuous Improvement Activities
	Consolidating and producing more change	Testing the model	8. LEVERAGING *Maximising benefit*	• Measure progress using Key Performance Indicators • Adjust intervention to meet new set of extrinsic factors
	Anchoring new approaches in the culture	Adopting a three dimensional view of the implementation	9. CONSOLIDATING THE NEW WAY	• Identify system usage to drive business decisions • Entrench Best Practice • Define 'culture friendly' measures

5.1 The Scoping Phase

The scoping phase is the first phase of the SICM and is roughly aligned (in terms of timing) to the end of the Scoping and Visioning phase / beginning of the Design Phase of the Information Systems methodology. In this phase the link between the Business Process and System Process takes place when the Change Management Team uses the Scoping and Visioning documentation to identify and scope the change management challenge. The Training Team also uses the Scoping and Visioning documentation to begin putting the training plan into place. This first phase can also be viewed as the user's urgent requirements for information and as such the business imperative (in this case the implementation of SAPHR) is urgently communicated to the business. This imperative is communicated to the business on a 'burning platform' (Kotter, 1985)

The key objectives of this phase is to:

- Identify the impact of the project on the business and the users.
- Scope the change management challenge from a business perspective and translate the Scoping and Visioning / Design work into a plan of action for ensuring business involvement and ownership information which the various interested groups can use to understand and plan their roles in the project.
- Identify and specify the role and interfaces of all key stakeholders to ensure that they all contribute to / are aware of the scope and impact of the project.
- Scope the training approach from a business perspective and ensure that the training methodology achieves the following:
    - Matches the specific system implementation requirements
    - Takes into consideration any budget/ operational constraints
    - Matches the requirements of the user group
- Agree post-implementation "best scenario" up front. This would be defined as the vision of the implementation and would need to align directly with the business objectives
- Agree on key messages to be communicated in the training sessions

The Questions Framework (Appendix 1) is the key to this process. This Questions Framework attempts to ensure that each of the seven interfaces is responded to – namely structure, strategy, systems, style, skills, staff and superordinate goals (Waterman, Peters & Phillips, 1980). Answers to the main questions will shape the detailed change management process and content, which will result in readiness for implementation and entrenchment of change. There is no standard recipe for change management The templates represent an attempt at guiding a structured thinking process, and

establishing a generic framework with sufficient room for adjustment, based on the specific requirements of the change process, the nature of the environment, etc.

Irrespective of how the change management process is structured, it is a time-consuming and resource-intensive process. The flip-side is that, should the change management work not be done properly, time and resources will be required anyway to manage the unintended consequences of a poorly change-managed implementation process.

The real test of change management lies in the extent to which the change is accepted and anchored into the practices and ways of the organisation, in order to create longer-term leverage for the business.

Change Management Questions Framework (Appendix 1) is used to identify potential Change Management issues as well as corresponding interventions/ activities.

SAPHR Implementation Experience

The implementation of SAP HR required that all people related data be captured directly onto the SAP system, not by administrative staff, but by line managers. This meant significant behavioural implications for managers. Initially line manager's focused on reasons *not* to engage in the required behaviour. However, to ensure entrenchment of the desired behaviour, the Change Team focused on the 'creation of a burning platform'. Meetings were held using a top – down approach. Initially with the General Managers then down to the lowest levels in the organisation. These meetings continuously reiterated the "Burning Platform" or the urgent business imperative to change. This business imperative to change was described in terms that every line manager could relate to and reinforced in functional language. A very real effort was made at describing the change requirements in language that every employee in the business could relate to.

Key Learnings

- The business imperative for change is *not negotiable*, the process to implement the change may be.
- At a generic level, the language used to describe the 'burning platform for change' can be very general. At a functional level, the language needs to be functionally specific. For example, if change is being described to the finance community, the descriptors must be in finance terms.

- The change impact needs to be framed in such a way that managers can always answer the question "how will the change affect me?". This in turn means that managers will be able to adequately describe this change to their staff.
- The change needs to be understood in terms of a corresponding consequence. For example, what are the individual consequences if an employee does not do something in accordance with the new change. Consequence must be felt at all levels – both in terms of reward *and* in terms of punishment.
- The consequences need to be scoped in relation to the seven S's – namely structure, strategy, systems, style, skills, staff and superordinate goals. An exercise outlining potential unintended consequences needs to be carried out and as far as possible, the ripple effect of every intervention understood.

5.2 Team Orientation

This phase concentrates on identifying the various project teams and key stakeholders to ensure alignment. It is critical that all potential stakeholders are consulted (i.e. those employees interested in the quality of the product) as well as any teams/ individuals that will be involved.

The objectives of this phase include:

- Agreeing the team measures and accountabilities of the management team.
- Ensure upfront that the individual who acts as the business owner for the function/ process or module is in a position to understand all aspects of the new process as well as possible *unintended consequences* (described in 5.1) of the process.
- Agreeing on a structure whereby process issues post go live are recorded and managed via an applicable forum.
- The Central Process Owners agree upfront the inclusion of process and system related issues as a standard Divisional forum discussion point.

The key teams that need to be identified for an Information Systems Implementation are:

- The Functional Executive (if it is a Finance Implementation, the Functional Executive would have to be from Finance). This person needs to drive the process at a systemic business level.
- Regional Project Teams – these teams will drive the behaviour at an operational level.
- Systems Team – will provide ongoing support for the Systems Implementation.

SAPHR Implementation Experience

This step was based on Kotter's (1985) change imperative that stipulates that all change needs to involve the people who it is likely to affect in its process, in order for it to be successful. The teams selected and trained together with the Regional Managers became the initiatives 'guiding coalition'

The Change Management teams mentioned in phase one above consisted of approximately ten individuals who were hand picked from the line by the General Manager in the region to be on the region's change management teams. There were eleven Regional offices at SAB at the time, with one change management team per region. These teams reported for the project into a head office change management team that reported to the HR Director.

Key Learnings

- Include *quality* people in the teams not just people who may be affected by the change. For effective change, team members must be chosen for their ability to influence as well as their conceptual understanding of the impact.
- Team members must be able to remove their functional hats and put on their implementation hats during the process. Each team member must have a vested interest in the process not in their function.
- The team is required to 'build a shared vision' for the rest of the organisation (Senge, 1990). By creating a desired vision for the future and articulating this vision through people who are able to influence, the sustainability of the intervention is more likely. Senge (1990, p.9) refers to the practice of shared vision as unearthing shared 'pictures of the future'. In the SAPHR implementation, the 'shared picture of the future' was described in terms that all affected employees could relate to. The 'shared picture of the future' included:
    - Line managers taking full responsibility for managing HR up and down the HR value chain
    - A reliable receptacle for the HR memory of SAB
    - An accurate and timeous payroll system
    - A focus on the strategic HR issues through a comprehensive reporting process

5.3 Information Gathering

The key objectives of this phase is to:

- Unearth and understand any regional-specific practice which has to change OR be accommodated in the system design
- Identify any major regional timing or resource issues that may impact on the system implementation
- Develop a process by which to manage the change – bearing in mind that these tend to be region specific
- To ensure an effective and well managed data migration process
- To ensure that data integrity is maintained by virtue of the processes utilised to gather the information
- Liaise/ consult with people external to the company who would be affected by the change

This was referred to as the pre-implementation analysis by SAB. Most of what needed to be done had been identified during the scoping phase; therefore this phase involves putting detailed plans together on how this was to be accomplished. This detailed plan needs to take into consideration the range of possible unintended consequences and a binary path outline that goes with it.

From a change management perspective it is important to identify any changes in custom and practice or policy and procedure and action in such a way as to ensure a consistent and fair process. It is essential that any risks are minimized. From a business perspective teams need to identify any regional practice, which has to be (1) included in the system scope or (2) managed away to accommodate the way the system operates. From a data perspective, the core team needs to ensure that all information needed to populate the system is identified and the data migration plan is accurate, detailed and easily understood. From an alignment perspective – identify any regional activity that will directly impact on the ability to implement the system (e.g. other projects that may be happening simultaneously.)

In this phase, a consultative focus group framework is recommended to identify problem areas as well as areas where the new system would add value and improve people's work lives. The change management facilitator should focus on facilitating in way that achieves a pre-determined desired outcome. In other words, to a certain extent the illusion of being consultative and participative should be created without compromising the desired outcome in terms of the company's strategy to implement SAP HR. This approach is highly effective if executed skillfully in that it enables

participation and thus a sense of ownership while ensuring that the strategic objectives of the organisation are achieved.

Finally, this phase involves information gathering from the region to ensure that the region and the regional processes are aligned to system construction.

SAPHR Implementation Experience

The SAPHR regional team's responsibilities included:

- Clean up of data and quality checking on the legacy systems for migration to SAP HR
- Identifying people management practices in the region that were non- standard and would not be compatible with the implementation of SAP HR. Since SAP HR's strength stems from its standardisation, all unusual or out of spec, HR practices had to be changed prior to the implementation of SAP HR. For example, after investigation in one region, it was revealed that one of the sites had the practice of allowing an extra half hour lunch break to certain staff members who worked in a more remote production site. This practice had to be discontinued because SAP could only accommodate one time-based role per job function. In this instance the impact of SAPHR was much larger than could have been anticipated. In fact, over 30 years of practice had to be altered and the ripple effect of this change extended far beyond the production site. In some areas it became an anecdotal reference to the 'cold-heartedness' of SAPHR.

Key Learnings

- It is important to map out all possible unintended consequences. These are consequences that may only come about as a result of the implementation. Typically these are consequences that have not been anticipated in the implementation design, but that may occur as a by-product on the implementation.
- Focus on the intended outcome. The Change Team needs to facilitate in such a way that the business outcome is the focus rather than the often emotive, hygiene issues. If the organisation has a good set of policies and procedures, hygiene issues should never be used as a diversionary tactic.

5.4 Site Preparation and Training

This fourth phase focuses on achieving regional readiness for the implementation as well implementing a communication plan. This phase also needs to ensure that the User Acceptance Testing process has been built into the change interventions. For high impact groups, it is recommended that a Pre-Implementation Analysis takes place. The objective of a Pre-Implementation Analysis is to understand fears, concerns and issues around the project and to ensure feedback and loop closure on key areas of concern.

SAPHR Implementation Experience

In the SAPHR implementation, communication was seen as an integral part of the change management process and was interspersed with all other stages. In keeping with the philosophy of all change management specialists, the view that 'there is no such thing as too much communication' was taken and varied and creative ways of getting the message across were utilised. These included:

- Letters/ e-mails; posters; cartoons; intranet site etc.

The purpose of the communication was to keep everyone affected informed about the progress of the project, to gain a top-of-mind awareness of the initiative in order to maintain the necessary momentum for the implementation and to try to create a sense of ownership for the initiative.

Key Learnings

- Understand the prevailing thinking that exists throughout the organisation by bringing key assumptions about the proposed implementation to the surface (Senge, 1990). This can be done by conducting Pre Implementation Analyses (PIA) at regular intervals. The PIAs provide an opportunity for people to discuss their fears and concerns as well as allowing the 'mental models' of the users to surface. These PIAs can then feed into the key decisions to be made about the implementation. After a cleverly facilitated PIA session, the attendees should be proponents of the change and this can add immense value to the change process.

- No news is NOT good news. The lack of an effective communication offensive will lead to corporate stories that may set the process back significantly. Any change generates discussion and without continuous input from the change team, this discussion is unlikely to be positive.

5.5 Implementation Phase

This phase refers to the 'switch on' of the system in the business. This 'switch on' usually starts on 'one fine Monday' and is characterized by a point at which the system is in operation in the business. The overall implementation will take place over a period of time as the initial 'switch on' will take place on a select pilot site and only then be rolled out to the other sites.

SAPHR Implementation Experience

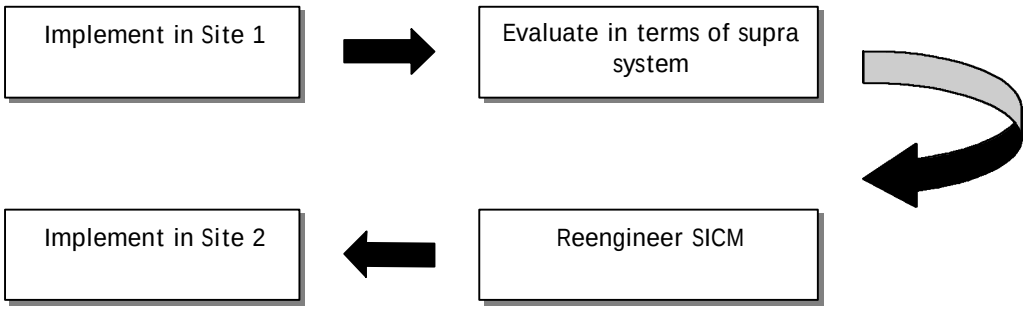
The SAPHR Implementation Phase took place over five months and was rolled out two regions at a time. The reason for the staggered implementation was to ensure that any systemic problems would be picked up at the early stages and appropriate interventions would be put into place. An exponential improvement of the SAPHR implementation was noticed from the first implementations on Sites A and B to the last implementations. By staggering the implementation, the implementation team was able to deal with any 'exceptional' problems and fix these problems before a further roll out. While this approach was slower and required significantly more resources (and business patience) than a 'big bang' approach, in the long term this approach saved SAB money as potential crises were diverted and changes to the approach were built into the roll out. Senge (1990, p. 62) refers to this approach as "faster is slower… virtually all natural systems, from eco-systems to animals, to organisations, have intrinsically optimal rates of growth. The optimal rate is far less than the fastest possible growth." The SAPHR implementation focused on the optimal rate not the fastest possible rate.

This approach was also based on System Dynamics thinking namely - identifying the problem, defining a reason for the problem, enhancing the model to deal with the problem, and then using the model in a future scenario.

Key Learnings

- Senge's (1990) 'faster is slower' law should be applied in an Information Systems Implementation. Due to the complexity of the system into which an Information System is implemented, a company would do well to stagger the implementation thereby providing the space and opportunity to make required changes without jeopardizing the entire implementation.

- Equally important is the supra-system or the external environment in which the organisational system has to operate. By staggering the roll out, the changing nature of the supra-system could be engineered into the subsequent implementations.



5.6 Business Alignment

This phase follows on directly from the roll out of the system. In terms of the System Implementation Change Model, the first 6 weeks (or until such time as the Business Alignment Process requirements have been met) after the implementation may be referred to as the Business Alignment Phase. Much of the BAP's work is about:

- Ensuring that the system integrity is settled and that the information in the system is correct
- Checking that users have met minimum usage requirements
- Identifying any major barriers to usage
- Ensuring that any major system problems have been identified and resolved

Therefore the Business Alignment Phase (BAP) is that phase in the system project life cycle where the focus is on ensuring *business alignment* of the system in the region and where the entrenchment and alignment of new business procedures (arising from the new system) in the region is ensured.

The key objective of the Business Alignment Phase is to ensure that all regional data and processes have been checked thoroughly, validated by the regional stakeholders and signed off. This ensures that the region has checked the accuracy of all the data and that the appropriate correlation between the regional process and system requirements has taken place.

The key objectives of the BAP are as follows:

- Business Process Alignment agreement between the regional team and the core team
- Communication to all users and regional teams regarding the process requirements of BAP, information regarding the system, updates regarding the system to all key stakeholders and other required communication
- Identification of system/ data problems
- Identification of minimum usage requirements per region
- Process and Procedures Verification thereby ensuring that the regional processes and procedures are in alignment with system requirements
- Data verification signoff is the process where all users work through the system and ensure that the data in the system is accurate and up to date

SAPHR Implementation Experience

It was only once the system went live that the system 'bugs' began to crawl out of the woodwork. At the same time behavioural resistance to the system developed a groundswell and in some areas users refused to comply with the usage requirements. In the instance described below, this had a major impact on the actual operation of the business,

One of the modules of the SAPHR implementation was the Time and Attendance Module. In summary this Time and Attendance module allowed managers to collect and process data on the movement of employees on site. This was done via a card swiping process whereby all employees were required to swipe onto site in the morning and for lunch/ tea breaks, and to swipe off site after their shift. And the only way which a person could get onto site was by using a 'swipe card' on the turnstiles. From a behavioural perspective, employees were unused to having to carry and swipe a card to get on and off site. This led to a situation where a number of employees misplaced or forget their card. When they attempted to borrow a colleague's card, they were locked out of the factory. Although the system had been correctly designed for security and control processes, the incorrect implementation resulted in a long queue of employees who were not able to get into the factory to work.

During this phase it was essential that daily meetings were held with the implementation team (including change management and technical people) to identify the root cause of the problems that

had occurred and to put actions in place to rectify them. In addition a User Complaint Form and a Help line was launched, through which issues could be logged and monitored until resolution was put into place

Key Learnings

- The change management team needs to anticipate the *behavioural impact* of the new system on all user groups. This exercise needs to be completed prior to the roll out
- A comprehensive feedback and problem resolution process needs to be entrenched as soon as possible after rollout. This is particularly important for an IT implementation, as users typically will begin to blame the system if they cannot do something. This 'blaming cycle' will begin to erode the integrity of the system and over time, use of the system will diminish. The SAPHR implementation revealed that over 80% of the system problems were in fact user problems. A short feedback loop with expert advice lessens the users likelihood of rejecting the system.
- Where possible provide a multifunctional Swat team that is able to resolve any possible problems. This would include having emergency technical staff available on stand-by to write or amend 'code' on the system or mobile trainers/coaches who are able to assist users in overcoming any obstacles that they had encountered.
- Best practice application and exchange between the regional teams needs to take place on an ongoing basis

5.7 Generating Short Term Wins

This phase focused on entrenching the required business practice in order for the desired results to be measured and ultimately sustained. The Anchoring phase takes place after the Business Alignment phase (BAP). It ensures the use of the system for its intended purpose and creates a platform from which continuous improvement initiatives can be based. This process can only be embarked upon once the data on the system reflects the nature of the operations in the regions. It is during this phase that the competence of the users is ensured to optimize system and user functionality. Process and structural issues that could not be envisaged during the pre go live phase are documented and highlighted.

It is critical that this phase be seen as a business process initiative and not a system initiative. The key focus here is to optimise the relevant business process utilising the system.

The objective of this phase is to ensure:

- The optimum competence and profile allocation of all the system users.
- Ensure that all users have the required knowledge and understanding of the processes that govern their function.
- It is a process of agreeing those business practices with the various stakeholders at the various areas in the business for the purpose of improved decision-making and ultimately continuous improvement initiatives.
- This phase should be positioned in such a way that the business creates a sense of reliance rather than compliance on the system functionality and the role it can play in the day-to-day operations of the business. By doing this the users will move away from feeling compelled to utilize the system due to this benefits realisation process. The anchoring process must highlight short term as well as long-term benefits for the users.
- This phase should not only enhance the business process but should also link into the key deliverables of the region/functions and should be utilised to achieve their goals.
- It is during this phase that the data from the system is used to measure the various processes. Key Performance Indicators need to be agreed and monitored and regular intervals.

Key Learnings

- Users are often the major reason a system is not used optimally. It is for this reason that during an implementation, continuous and focused training needs to take place.
- This training should ideally use the system information that is being generated to make training as “live” as possible.

<u>SAPHR Implementation Experience</u>

This step is based on the principle that ‘low hanging fruit’ should be picked first, or ‘easy to accomplish’ tasks should be undertaken first. Measurement and reporting of Key Performance Indicators relating to the use of the new system was implemented and successful users were identified and publicly congratulated and rewarded. In addition celebrations were held for those areas that had made progress in using the system.

5.8 Leverage

In this phase the quantification of the benefits or savings to justify the initial investment takes place. Success or progress of the project is measured against a set of Key Performance Indicators (KPIs). These KPIS need to be established at the outset of the project The costs of doing things prior to the implementation of system is assessed, and once this happens, a comparison between the old costs and the proposed new costs take place. This exercise should be done prior to embarking on the project, and then on a quarterly basis.

The objective of this phase is to:

- Identify system usage to drive business decisions
- Entrench Best Practice
- Define 'culture friendly' measures

Key Learnings

In the SAPHR implementation a set of KPIs were identified at the start of the project. The KPIs should link directly to the business strategy and intent and should be monitored as soon as the Information System has achieved a minimum level of usage.

In the SAPHR implementation, the KPIs were measured once SAPHR had gone live in all the regions. The following table is an example of some of the KPIs used to measure the usage of the system. Each region is expected to report back against these KPIs and a usage graphb is plotted on a monthly basis. These KPIs require that every line manager (about 1600) uses SAPHR as the only available HR system.

Time	Normal Time in hours Overtime 1.5T Overtime 2T O/T % of NT Number of employee's exceeding 20hrs O/T in the month Number of employee's exceeding 6 hrs O/T in a week (totalled for the month)
Absences	Absences **(avoidable)** as a % of Normal Time Leave (planned) as a % of Normal Time Out of Policy Leave as a % of Normal Time Paid not worked as a % of Normal Time No Clocks/Worked Overtime as a % of Normal Time No. of employees forfeiting leave Total annual leave owing to employees How many employees availed of special leave

5.9 Consolidating the ‘new way’

The Systems Implementation Change Model was designed to ‘hook into’ the already existing organisational culture. As SAB has a high performance culture, performance management became a key tool. As described previously, key indicators relating to the successful system implementation were incorporated into the Performance Goals for all employees from General Managers downward. By incorporating SAPHR indicators into the existing Performance Management system, the implementation was seen as a business imperative rather than an IT imperative. This shift in focus characterized the SAP implementation in comparison to prior implementations.

The high performance culture of SAB means that most employees are achievement motivated and performance oriented. By ‘handpicking’ team members and by using top management to choose the regional teams, the SAPHR project was seen as both an exciting learning experience and an opportunity to enhance their career prospects.

In addition, the existing competitiveness that existed between the regions (and employees) was used to encourage conformance to the new way of doing things on SAP HR.

Finally, the training that was given on the implementation project was incorporated into SAB's standard training course offerings and will be attended by all new employees or for refresher courses by existing staff

Key Learnings

- Use the existing *good* parts of the organisational culture to encourage behaviour. If ‘having fun’ is the way ‘things get done around here’, use this as a behaviour hook when implementing change.
- Use a change initiative to alter the non-value add components of the organisational culture. The SAPHR implementation was used as an opportunity to break down regional parochialism.
- Use Key Performance Indicators to drive the right behaviour into the culture. These KPIs can be used at business meetings and if not met, a level of ‘shame’ can be introduced.
- The Functional Process Owner needs to continuously ask for the information generated by the new system. The leadership must be seen to want and need the information. As soon as it appears that the information can be gotten from another arena, usage of the system will begin to slip.
- Remove any ‘legacy’ systems or process to ensure that the IT system is the only system that can be used.

- Finally, although consequence management is extremely successful in the implementation and ongoing sustainability of IT systems, a carrot is required to ensure that there is a tangible benefit to the actual users themselves. A key 'carrot:' for line managers in this implementation has been the access to the 'real time' reports and access to an organisational memory that assists in day to day people management.

6. Conclusion

The SAPHR implementation in SAB may be considered a success. To date many of the business imperatives have been met including the original objectives of the business plan. In addition the project was rolled out in budget and in the required time space and savings have been seen in the following areas:

- An overall reduction of 24 heads directly related to the implementation of SAPHR;
- A 35% cost reduction in the production of producing a payroll (payslips, reports, EFT) and a 100% accuracy in producing a payroll on a monthly basis;
- By making the time of employees visible to management , managers are able to visibly see the short time and this is estimated to have garnered savings of 2% of time costs ;
- All HR reports are available at 'real time' on SAPHR and there has been a significant decrease in the administrative costs associated with requests for reports.

The 'new way' of HR in SAB (the SAPHR way) has become the only way and this has ensured that there is enough momentum to encourage long-term sustainability. There is absolute commitment from top management and the high performance culture supports the way that SAPHR has been entrenched in the business.

Finally the users themselves are beginning to see the business benefit of the system, and along with a dedicated technical and business support team, it is anticipated that the raison d'etre of implementing a system such as SAPHR will be realized in the short term.

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