Article

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Creating an information systems strategy

Creating an effective Information Systems Strategy to manage business information needs.

What is an information systems strategy?

No matter what kind of organisation you are, you'll have some form of business system (usually multiple) – it may just be a set of macro enabled spreadsheets, it could be a cloud based software solution or it could be a monolithic ERP solution.

Businesses need data to run. Data needs to be stored somewhere, shared and manipulated in order to turn it into information. Every business system, bespoke or otherwise, is purely a mechanism for pushing data from A to B via C, for showing information, for sharing information, for using raw data to calculate information or for auditing information. Portals, websites, ERP systems, planning systems, data warehouses, transactional systems – they are all 'Information Systems' – their purpose being to share information with the relevant people who need it, at the points they need it to cause action, which allow decisions to be made and for the business to function as it needs to.

Why do I need an effective information system strategy?

Managing information needs in a business can be problematic. It's almost unheard of to come across an organisation that has no systems in place. The majority of organisations have many; all performing a particular function, with duplicated data which doesn't always stay in sync, which invariably don't integrate together and which causes reporting inconsistencies, manual effort and regulatory nightmares. It's often the case that new systems are implemented in isolation to the rest of the business systems because of pressure from the executive board to 'get something in'. Often you see interim solutions that've been implemented as 'we didn't have enough time to do the proper solution' and 5 years later the 'interim' solution is still in place. Or where people in the core of the business have implemented a solution because 'IT were never getting round to doing anything about it.'

What does this all lead to? A massive mish-mash of systems which don't speak to one another, that can create more problems than existed before they were implemented (along with lots of wasted money, time, blood, sweat and tears!). Sound familiar?

So where does it all go wrong? Organisations have to respond to the market they're operating in, they have to be agile, and they have to be able to act on regulatory changes to survive. External influences make organisations reactive – and inevitably (it seems) with reactivity comes disparity of information. Whilst it would be impossible to remove the reactive nature of organisations trying to survive in a difficult economic environment, and whilst pragmatism is required to meet the pressing requirement for businesses to be agile; there is a need to take a more strategic view to ensure that the information needs of the organisation can be fulfilled.

Unfortunately, there isn't a silver bullet to fix the problem (sorry to disappoint!); however going through a process of understanding the information needs of the business, having a vision of the systems architecture that has to be in place to support those needs, and ultimately delivering an architecture that provides an overall structure, should help an organisation ensure that they can react, whilst maintaining the integrity of their information. The following roadmap is one that we regularly follow when helping our clients get from their current state and derive a vision of where they need to get to.

Step 1: Understand what the business is trying to achieve

The first step is to really understand the business strategy and key drivers for the organisation. It's an essential starting point to ensure that an organisation has a clear idea of what financial targets it's aiming to achieve and what customer centred initiatives are required to meet those aims. Once those are understood, it's possible to define/understand the internal processes and people related issues to correctly align them within the overall strategy.

As a business we use several tools to help us to do this including the Discipline Driver model of Treacey and Wiersema (1) which defines the core driver for the business – a product leader, a customer intimate organisation or an operationally efficient organisation. The Hedgehog concept derived by Collins(2) which defines the core values and purpose of the organisation. And the Balanced Score Card (3) and associated Strategy Map (4) defined by Kaplan and Norton which allows an organisation to understand the financial, customer, internal, and learning and growth perspectives for the organisation.

This stage of the process is required to establish the context for the Information System needs, and provides the understanding for why certain information is required and ultimately the impact on the aims of the business if those needs are not adequately fulfilled.

Step 2: Understand what the information needs of the business are

Once a clear definition of what the business is trying to achieve is outlined, the next steps are to ensure that the information needs of the business are understood.

This is carried out by identifying and understanding the main functional areas of the business and the major business processes that are needed for the business to operate. Through understanding the broad processes and functions within an organisation, it helps to identify key stakeholders who have a vested interest in the information and enables further detailed discussions as to what the information is used for.

Step 3: Assess the status quo

To know where you want to get to, it's always a good starting point to understand where you are now. An important part of the process is to understand what's currently in place both from a systems perspective and a data perspective. It's crucial to gain an understanding of the current touch points between the different systems and between the data; whether those points are automated or manual; the key functions that are performed within the systems; and how the data is used. The aim of this part of the process is to produce a systems map and a data map which shows the current picture, highlighting data/information gaps, duplication, inefficiencies and potential areas for inaccuracies.

Step 4: Review and consolidate

This is the intellectual part of the process; taking the current picture, understanding the overlaps, the gaps and the current and future information needs of the business – using this information as a basis it's then possible to identify areas to consolidate, change and improve. This involves identifying areas where:

- Data is duplicated – to understand what can be done to ensure that the data no longer needs to be duplicated.

- Data is missing – to understand where within the process that data needs to be collated to ensure it's available for use by the relevant people.

- Data is inconsistent – to understand where data is being manipulated and changed in more than one place.

- Systems are not performing – to understand whether the systems need replacing or whether the core functions they are performing would be better achieved using another system or process.

- Manual processes are in place – to understand the 'spreadsheet' based systems and paper based processes in place to identify if they would be better achieved through automation.

- Location of integration points with third parties – to understand what data moves inside and outside of the organisation.

The purpose of the step is to categorise the systems with regards to their main functions; identifying systems that should be kept within the overall architecture, the systems which need to be removed or replaced, the systems which need to be changed and the areas where the different systems should integrate.

Step 5: Define an enterprise architecture

The final step is bringing all that information together to define an overall conceptual enterprise architecture which identifies the core systems categorised by function. The mechanisms by which users will access the data and analytics in the systems, for example through portals, productivity suites, web based applications and business to business interfaces. Workflows to map the business processes. Data orchestration to maintain data integrity and greater business intelligence suites to provide management information and operational reporting. The ultimate aim is to provide a conceptual future vision for an information systems structure to support the requirements of the organisation.

So, following this process you'll have an idea of the information systems architecture you need in place to support your organisation – job done? Not really – now comes the arguably harder task of delivering that vision...

Continue the conversation

If you'd like help with your information systems strategy you can get in touch on 0345 094 0945 or via email at helen.fawcett@waterstons.com.