

In this, I digress from the scope of traditional risk management, and move into the field of business strategy and set-up. A lot of the risks and opportunities an organisation is facing at any point in time is based on the way the organisation and/or business is set up in the first place, and from that, the design of the business system – hence the usefulness of addressing this in relation to uncertainties as well.

In principle, a business system is a model of the company/organisation. There are multiple approaches in management literature as to the design and use of this. Hence, to align you with my understanding, I briefly describe the concept of a business system as I know it.

When designing a business system, trade-offs are made on what to sell, what do and what to buy from others – and embedded in this, choices of where the organisation needs to be highly flexible, and where it may focus more on efficiencies.

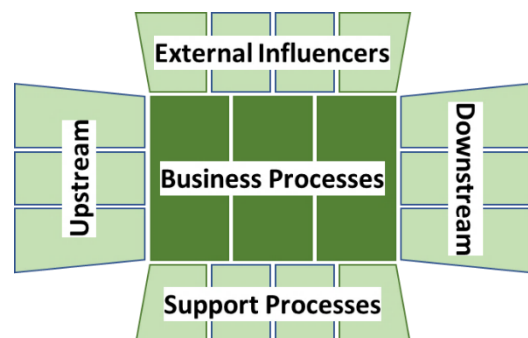
These issues will then be combined in some perspectives as to the risk and opportunity-based design of a business system.

Business systems

As stated, a business system is nothing more or less than a model of a business, or any other organisation for that matter. Any organisation has some type of business system, whether this is explicitly modelled and defined or not.

The most common way to model a business system is in line with this model, which can be detailed to the extent needed for the explicit purpose of the model.

Hence, the business system model for a strategic discussion may be considerably simpler than the model used for flow of information in the same organisation.



In this approach, the centre of the model is the set of processes to develop, buy and/or manufacture, market and sell whatever the business is selling. This may be processes and/ or functional areas such as product development, purchasing, manufacturing, marketing and sales.

However, to e.g. a retailer, the “manufacturing” element is somewhat elusive, and to a hotel it comprises something different than what is the case for e.g. an automaker. This illustrates that the business system of different organisations may be very different.

Please note, the model includes that some of these processes are outsourced, whereby e.g. a company may choose to have some elements of e.g. producing marketing material outsourced despite its being part of marketing and sales.

To the left of this, and much on alignment with the model used in Michael Porters “Value Chain” are the upstream processes, i.e. the processes/ materials etc., the organisation has chosen to buy from vendors. These are often commodities and base materials used for manufacturing, but will also cover elements such as water, energy, and other utilities. Again, the explicit elements differ significantly between industries and also between organisations within the same industry.

To the right, also in alignment with the “Five Forces”, are the downstream processes. These may be retailing to a consumer goods manufacturer or distribution for an on-line store. Again, the contents of each element as well as the number of downstream elements vary.

Below, and outside the Porter model are the supporting processes, which the organisation depends on for smooth operations. These are typically IT, finance, HR, legal, but may also be logistics if this is not part of the core business operations.

Many organisations have chosen to outsource significant parts of these supporting processes whereby they simplify their internal organisation – but they also reduce delivery control and hence increase risk taking.

On top of the model are the external influencers. The elements here come in four groups:

- Business Conditions, which are legislative requirements and limitation as well as business standards the company needs to comply with. If you have a battery-operated product, you must have a battery box which matches the standard battery sizes, just to name one such example
- Environment, which is seen in the broadest sense of the word. One element is the physical environment with scarcity of natural resources and sustainability, etc., another is the market environment the organisation is a part of i.e. is the market growing or stagnant, is it global or local, is it ...
- Technology, which is both current and emerging technology – whether it is being used or not by your organisation
- Competition, which encompasses both missing elements of Porters Five Forces model. These are current competitors as well as emerging competitors moving into your industry – and substitute products your customers may wish to buy rather than what you are making

As stated, the business system of each organisation is unique – and may differ even significantly between two close competitors in the same market, and will naturally be totally different for a company in another industry.

The description of a business system can be detailed to the level needed for the whatever purpose it is modelled. The strategic model may be rather coarse and focus on key elements of the organisation only, and may in some cases discard the attention to supporting functions altogether, although that is rarely recommended.

For more detailed analyses and design purposes, a model detail design of the business system may be required.

On the about page, a brief example of a breakdown of the assumed business system of an auto manufacturer – for simplicity, focusing on the business processes only.

In this model, the first level is the one assumed used for strategic design of the business system where questions like “to which extent do we manufacture ourselves”. At this strategic level, the external influencers are probably the base of the discussion as these are more complicated and difficult to change, whereas everything else can be (re)designed.

The discussion of external influencers is as important as location when looking for a house.

At the next, and still overall level, the “black box” of manufacture has been broken into three components, which need not be consecutive as they are illustrated here.

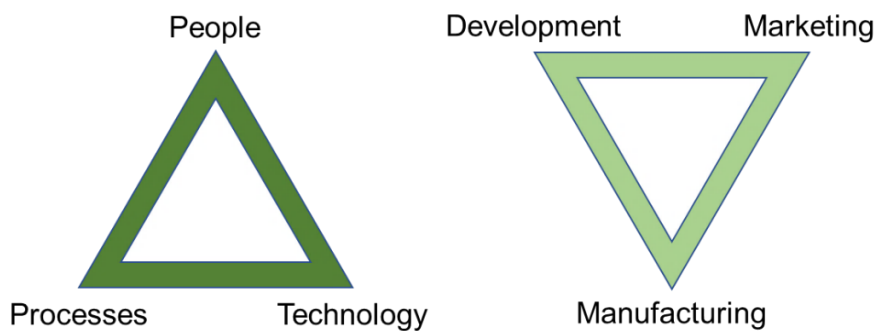
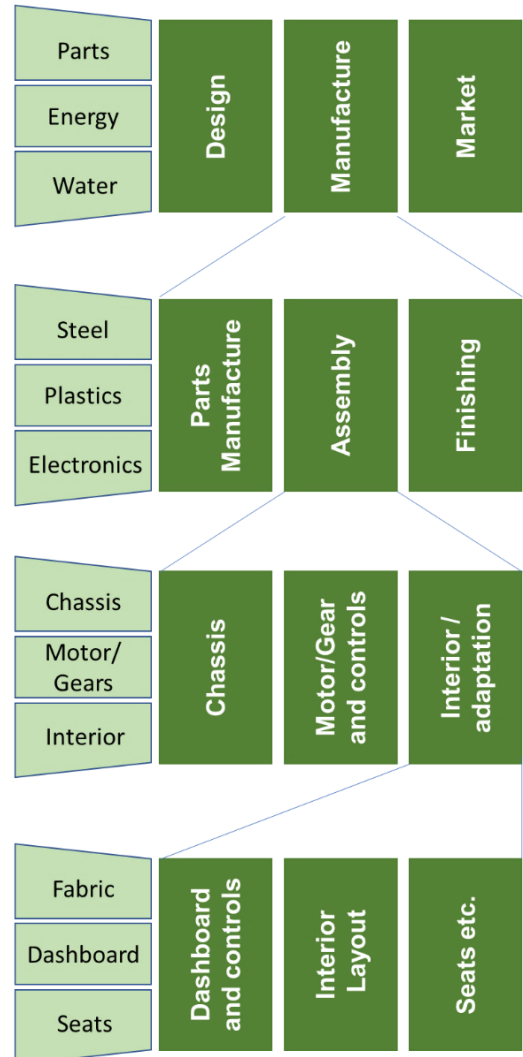
Looking further into the details, the assembly process is further broken into steps, and finally, at the lowest level shown, the adaptation and interior assembly has been split into processes which can be highly useful for defining process flows on a more operational level.

The level of detail has no real lower level. You can make a business system model for your own individual position by explicitly considering what upstream deliveries are you using, what are you producing, and in which steps/approaches/processes/supporting processes do you rely on, and what do you deliver to whom – plus, what are the external (to you) influencers you have to consider when defining the optimal way to do your job,

As such, the business system approach to modelling an organisation or a business is highly flexible and useful due to the systematics of the approach.

Addressing risks and opportunities is strongly supported by a business system model, where risks and opportunities for each element can be sought out, identified and addressed.

Management literature offers many other modeling tools to illustrate an organisational or business setup. The below two, mutually independent, models both focus on balancing three elements



The left hand model balances the use of technology, the processes and the people performing the processes and can be applied to any individual set of tasks.

The right hand model addresses three core processes in a manufacturing company, and focuses on defining the trade-offs between e.g. development and manufacturing. This model may be more immediately available in more strategic discussions on what to focus on, and how to deliver this.

When addressing risks and opportunities, I have found the Business System approach more fruitful, and hence I focus on that.

Processes

Whatever business system an organisation has, explicit or not, what is happening in the organisation is a set of processes, and the concept of processes and processing has been and still is changing – and hence is a source of risk management consideration. After all, most risks and next to all opportunities materialize because somebody did something, i.e. there was a process irrespectively of whether this is a documented standard or an ad hoc action taken by someone.

When addressing processes, there are two components which are often discussed in unison, but are most often mutually independent. The issues of effectiveness and efficiency.

Effectiveness is the parameter by which you decide whether the process you have deliver the benefits/results you wish/plan for. Very little is done without some purpose – and the concept of effectiveness is linked to the fulfilment of this purpose.

Hence, to measure the effectiveness of a process, you must first define, what you wish to achieve by doing what you plan on doing. If you are in Berlin and want to go to Paris – walking there will be an effective process, assuming you, eventually, get to Paris. There will be other ways to get from Berlin to Paris – and a lot of them will be equally effective.

Merely start walking from Berlin in a south-westerly direction is probably not effective as there is little chance you will reach Paris, whereas walking west from Berlin will get you to France at some point in time.

This example may be a gross simplification, but it does illustrate the need for a precise objective/target in order to define the effectiveness of a process. Elementary as this may seem, my business experience has shown multiple examples where the “objective” is to do something rather than to achieve something. When that is the case – effectiveness is very hard to measure. Strangely enough, the more strategic the decision on actions/processes are, the less likely or fluffier the targets appear to be defined.

Efficiency is the parameter by which you decide whether the allocation or use of resources exceeds what you need to allocate to get the task done.

When focusing on efficiency, the perspective is “can we do this with less resources”, and hence does not in itself address whether or not the process is/remains to be effective. Here, the framework is not about what to achieve, but what to “spend” to achieve.

The metrics are often time, people/manhours and money – and all are often monetized as “time is money” and manhours has a cost to it. Here, monitoring efficiency is quite easy and defined as “how much ... can we process using ... amount of resources”.

If time is much more important than money, flying from Berlin to Paris may be a vastly more efficient process than walking, and other considerations can be used for driving, taking a train, etc.

Continuing the example, assuming that flying from Berlin is seen as the most efficient process, it is probably cheaper and faster to fly to Hamburg than to Paris as the distance is short and it is a domestic flight. However, whereas the overall direction may be fine, you are still not in Paris, and the process has become so efficient, it is in-effective.

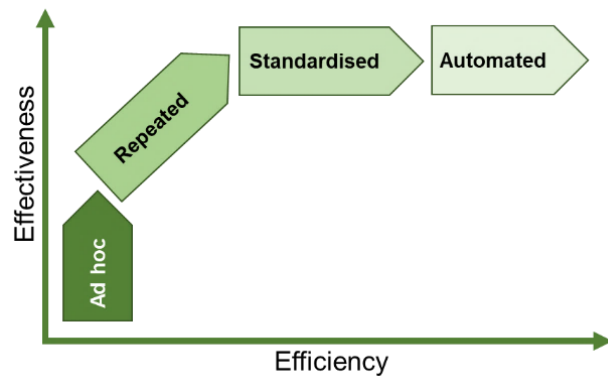
This again may seem to be a gross simplification, but I have experienced multiple examples where leaders focusing so hard on efficiencies and cost cutting, that they “forgot” about the purpose of the process and opted for the cheaper solution, even when this is not effective. Especially in risk

management processes, where the effective mitigation of a risk may never be needed as the risk may not materialise.

A good process is effective as well as efficient. Whereas this is an almost self-evident truth, the parameters change as a process evolves, which most processes will over time.

At first the process is an **ad hoc** trial and error seeking out, building on what seems to work and discard what seems not to work. The focus is almost entirely on effectiveness. This step may be relevant any number of times the process is executed, and for some, e.g. creative processes, it is deliberately chosen as the approach to processing.

However, when the same or similar target has to be met over and over again, the process begins to get **repeated** as experience have shown a “good” way to execute the process. At this point in time, the focus begins to change and looks more at efficiencies without ignoring the effectiveness of the process.



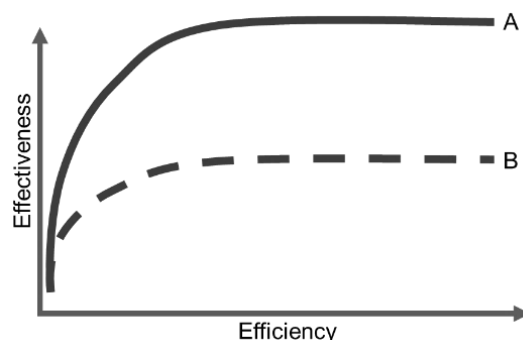
Then, for processes which are repeated many times, the process evolves into a **standardised** approach focusing on a defined “best practice” for this particular process. The focus is entirely on efficiency as the effectiveness of the process is presumed “in place”.

At this point of the process evolution – processes tend to be documented and trained for new employees to process. It is also at this stage some processes are outsourced to save even further resources.

Finally, the most standardised processes become **automated** and executed by computers or machines of some kind. The use of manpower is reduced to a minimum or eliminated altogether – and the equipment executing the process is speeded up to enable even faster processing.

This type of process evolution is quite common and intuitively makes sense to go through. However, there are a number of risks related to adhering to this type of process evolution, especially if/when the process takes significant resources to execute well. In any organisation, there will be people focusing on the very tangible efficiency, and they may seek to push for increased efficiency before the optimal level of effectiveness has been achieved.

Looking at the best practice evolution of process “A” in this chart, efficiency driven people will implement a line “B” process, which will give them an automated and fully efficient process faster – but will potentially never deliver the effectiveness aimed at.



The danger/risk exacerbates if/when the objectives is not perfectly clear, making effectiveness hard to measure, whereas efficiency is “always” easy to measure precisely.

Beyond this, targets as well as business conditions change, and hence, what was effective “last year” may be inadequate “this year” and the process needs to be redefined to remain effective.

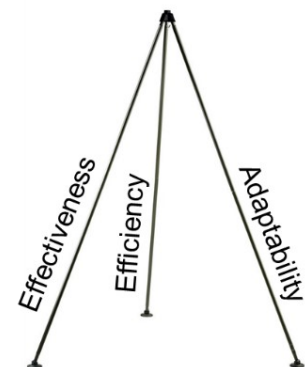
Changing an ad hoc process is inherently simple as you merely replace it with another ad hoc process. This is the idea of trial and error. Changing a standardised or even automated process is significantly more cumbersome, and the organisation may be prone to retain the process, despite the inadequate effectiveness. In worst cases, piggy-back some added process on top of it to remedy the issues.

In a couple of iterations, the process becomes highly complex and one can severely question the true efficiency. Each step may very well be efficient, but the totality does not have to be – anymore. As an example, I believe the tax system and -legislation of almost any country is a victim of such a development.

The point of the above being, that designing the business system and the way to operate the organisation is also very much about designing the best possible processes throughout the organisation.

This means carefully and explicitly balancing effectiveness and efficiency with adaptability. None of the legs of the tripod can be sacrificed for the two others.

Process design is not about risk management, but there is a lot of risk mitigation embedded in process design, and hence the relevance here.



Klaus Schwab, head of World Economic Forum, has described the fourth industrial revolution as the period of time the world is in when written (2017 and already partially outdated). In this period, processes of all kinds are being digitalized and robotised to an extent that will profoundly change the way we live.

It is decades ago the auto manufacturing industry applied robots to an ever-increasing set of tasks. Auto assembly is today highly robotised as this is far more efficient than the former assembly processes. Many other industries systematically and massively insert robots to handle processes on the production floor. Common for these processes are that they are well documented, massively repeated and in many cases, expensive in terms of labour if done by human beings. This has already permeated warehouse handling as well.

Automatization and robotization will however, not stop here. Self-driving vehicles are seeing the light of day, and in offices, more and more transactional processes are being handled by robots. In financial trading, this is done to be faster rather than cheaper – but the purpose set aside, the processes are being robotized.

In the fourth industrial revolution, more and more processes will be taken over by robots and artificial intelligence – or computerized intelligent systems. Such systems are not new to the world. Even delicate operations as nuclear power plants have for decades had intelligent systems handle many safety processes to ensure these were effective and not hampered by human beings in panic.

The level of competence and use of artificial intelligence today is higher than ever before. Just a small example. Facebook stopped a trial of artificial intelligence communication when they found that the computers involved rapidly left English as a language and devised “their own” language, not understandable to human beings, which made the trial too scary to continue.

The computers driving Google translate has also created a “reference” language. Hence, when Google can translate English to/from Japanese, and English to/from German – it can also translate to/from German and Japanese – without using English as a stepping stone.

Contemplating the perspectives of such developments may be scary – but it does also provide a range of opportunities the world has yet to fathom, grasp and utilize. I have found that Klaus Schwab’s book on the fourth industrial revolution is more thrilling and inspiring than most fictional novels I have ever read.

My obvious point in raising this is, that adaptability of processes is highly important when designing a business.

Balanced business system design

Design of a business system in this context is as much about the business system model and structure as it is about the processes performed in the business system. The sequence of developing/designing a business system is a circular chain of design elements as shown on the about page.

First, in the middle - the question of “why are we here”. This is assumed being stable. The question can be made more explicit as “Why is the world a better place with us in it, than without us”. Today, some current organisations do seem to have the primary focus on making shareholders rich(er) – but as a motivating factor for employees, business partners and customers, it hardly suffices.



Based on the mission/purpose, the next is to define, what aspirations the organisation has. This may be a number of well performing graduate students from a university, curing of patients for a hospital, giving consumers a good experience for a consumer goods manufacturer or the like.

Based on this, find out what needs to be done in terms of development, manufacturing, marketing, sales, service as well as supporting functions. This yields the first draft of the business system model.

Next step of the design is to address, which of these actions/things to get done, are to be done by the organisation itself, and which are to be sourced from vendors or partners. This yields the overall organisation of the entity – and leads to the question of organisation. Is this to be conglomerate, regional, product based, customer grouped or what? Which teams do we plan to report to which executives, and what is the underlying structure of system and processes?

Then comes the level of management. What are the processes to define the strategy, allocate resources, drive operations, etc.? Which are the metrics which define the level of success?

Finally, the governance structure. Which parameters are measured and reported to whom? Who can sign off on what, and how do we ensure all the different areas created are pulling in a reasonably aligned direction?

One thing is to design a new business system and processes from scratch. Very few people ever get to do that. For most business system and process design is a matter of adjusting/changing/redefining a system which is already in place – to some new system which is expected to be more appropriate for future needs.

I noted a quote from Ray Stasieczko, which stated that *“A company becomes obsolete when they focus on bringing the past to the future instead of bringing the future to the present”*, and even the Muppet Show had a future laboratory *“where the future is being made today”*.

In a volatile world as the one we have today, any attempt to retain the past are destined to have a short success life. Furthermore, whereas this is the case today, it will be exceedingly the case in future years, as I get back to in chapter 6 in this book.

Balancing the business system means balancing on some explicit parameters and define the optimal trade-off between effectiveness, adaptability and efficiency as shown in the above tri-pod.

- Effectiveness ensures you get the right job done and meet your target, but does not address the use of resources, nor any needs for process adaptability
- Efficiency ensures you apply a minimum of resources, but is often leading to a more rigid approach which has less adaptability and also simply presumes the actions taken are adequate to meet the targets set
- Adaptability ensures you can easily adjust the way things are done, but whereas it does enable meeting the target eventually, it often tends to require more resources than optimally needed

I have seen this trade-off in engineering approaches, where a new piece of equipment is needed to manufacture some or another component. The adaptable approach will be to go for a “semi-automated” process and “hand craft” component variances. The efficiency approach will be to create a dedicated manufacturing equipment, which can churn out thousands of components with a minimum of resources. The effectiveness approach will be to develop a flexible manufacturing equipment, which will be more expensive and probably slower than the dedicated equipment, but will enable some adaptability and adjustment without having to “start over”.

Auto manufacturing (Ford) were the key driver behind the second industrial revolution creating the industrial assembly line. This was highly efficient and hence outperformed the more craftsmanship-based manufacturing processes used up until the early 1900's. The auto manufacturing is also in the forefront of using robotics to sustain productivity, whilst allowing for adaptability. Some auto manufacturers today have assembly lines which do “single piece mass manufacture”, where different models of the brand's cars – with different gear-boxes, different motors, different interiors leave one and the same assembly line, without losing productivity/speed. The trade-off – the setup is assumingly significantly more expensive to establish, but then again, the level of utilization can be kept higher than what will be the case for dedicated equipment.

In a simpler business system, a pizzeria is able to deliver a huge variety of pizzas through a business system where the dough is one of a few options (deep-pan, or standard, wheat or wholegrain and the like), and having the ingredients ready for all types of pizzas. In the “assembly” process it is simply adding whatever fillings the customer wants on the pizza, and bake it for the few minutes that takes. This is a simpler, yet fully valid approach to single piece mass manufacturing.

During low-business hours, the pizza cook may prepare ingredients and dough ready for assembly when the lunch and dinner guests rushes in.

In any business, all three elements of balancing must be present to some extent.

- Effectiveness is needed to ensure the desired products/services are created. This sets the baseline for value and quality of whatever is being sold/delivered
- Efficiency is needed to ensure the value of the products/services exceeds the costs of making them
- Adaptability is needed to meet changing customer needs – even within a fixed/stable product range

However, not all processes and business system elements need to have the same balance, and in many cases, the optimal business system is compartmentalised to the extent that those areas/functions which are in need of one balancing element can focus on that element.

Typically, however, this will be focusing on two balancing elements and “sacrificing” the third. Using the example of the auto manufacturer.

- Once the gearbox design is fixed and documented, manufacturing of gearboxes can focus entirely on efficiency, perhaps by having parallel manufacturing processes for standard shift and automatic shift gear boxes

The overall business system and planning ensures that the demand for e.g. automatic gearboxes is stable to the extent an inventory can handle any volatility as the same gearbox is used in multiple car models, including future models, and the demand hence is more stable. Thus, the gearboxes on stock will be used within a reasonable timeframe, and is not truly a risk

- The assembly of the car focuses on efficiency and adaptability, again assuming the car design, components and assembly processes ensure the quality of the vehicle (effectiveness of the assembly process)

This process assumes that any component needed is immediately available in a seamless delivery system which eliminates waiting/pausing the assembly process and hence ensures the high-speed efficient single piece mass manufacturing. Assembly time, including final inspection and testing, is a matter of hours

It may inherently appear a strong strategic decision to move the flexible and robotic based assembly approaches upstream into gearbox assembly. However, all else equal, the investments needed in robotics compared to that of dedicated equipment means higher capital and potentially even slightly lower manufacturing efficiency, and the benefit of flexibility has little or no value as demand is compartmentalised to be sufficiently stable to allow for the flexibility focus

- The car design process focuses on adaptability first, ensuring the new model car is highly desirable by consumers and matches market needs

During the design process, some elements of design may apply a “design for manufacture” approach to ensure that the model designed can be manufactured and hence profitably sold at the price requested by marketing

Other industries apply similar approaches – and define, where to make which trade-offs in the balancing of the business system. The more stable the industry and demand, the fiercer the price

competition, and hence the bigger the need for efficiencies. To the end consumer the trade-off is one of price and value, where time has a value added to it.

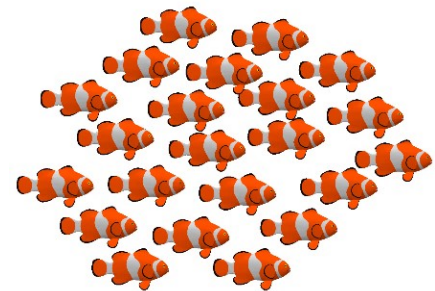
I have gained a lot of my business experience from the toy industry. In that industry, demand is defined by 5-10-year olds to whom toys are fashion. They want what is new, what is “hot”, and what is being talked about amongst their friends – and they want it NOW. Furthermore, most toys are manufactured in Asia and price competition is tough as purchase has to be sanctioned by adults.

This leads to an industry where the push for new products at low costs totally dominates the rules of the game ... plus the seasonality as most everyone seems to celebrate Christmas in December. This puts high demands on the business system design of toy manufacturers, and yet, the business systems and strategies of the top toy manufacturers appear quite different, illustrating that there is never just one best solution.

Designing the optimal business system is a daunting task in most organisations. Naturally, adding volatility and disruption on top of this will only add to the complexity of the design and deployment processes. However, a suboptimal business system will give suboptimal performance.

The business system of an organisation is a core set-up, and hence rarely easily adjusted, at least in larger organisations.

A solution may be to “conglomerate” the organisation and basically have a wide network of independent and highly flexible units, rather than one big unit. However, this comes at a cost of “how to consolidate” such a herd. Fish, and birds, intuitively move in perfect alignment – the same is alas, not true for human beings and hence organisations.



Yet, the Italian apparel company Benetton has been known for decades to have a highly controlled, but networked structure, where the factories are 100% Benetton as well as 100% independent, i.e. not owned by Benetton. The same way, stores are 100% Benetton and 100% independent. The core of the company purchases wool, and do designs, plus control the flow of goods, the flow of information and the flow of money. This gives the company a significant agility locally – whilst maintaining the corporate “body” of a massive organisation.

The massive “great white shark” of, especially past, organisations, where the driving force was “dominate or die” is another known approach – but the shark has other vulnerabilities as well. Ford was originally aimed at having everything from rubber trees (for tires) to steel works to manufacturing and sales within the Ford corporation to ensure maximum alignment and control. Today, the company is relying on external vendors to a similar extent, as like auto manufacturers.



Embedding the simplest of risk management approaches to the business system design and strategy process will, in many cases, create a lot of value in terms of:

- Ensuring that the rather rigid structure of a business system is adaptable enough to meet the needs of the time horizon in which this is designated to work – nothing lasts forever

- Applying processes and tools to identify needs for adjustment of the business system in due time to make this happen without unduly stressing the organisation, and hence retain efficiencies in the process
- Using these same processes and tools to identify where the business system can be used to create disruptions in the industry – re-invent the organisation – and thereby create a strategic advantage

One may argue that the above is a strategy process and has little or nothing to do with risk management. I agree, it is a strategy process, but I do not agree it has nothing to do with managing risks. In fact, I see embedding systematic uncertainty thinking and processes into the strategy process as the optimal way to manage the uncertainties of the organisation, whether they are happening to them or being initiated from within.

A good, resilient and flexible business system can effectively minimize or eliminate a lot of risks and make room for pursuit of many opportunities, whereas a sub-optimal and rigid business system will lead to massive risks and limited opportunities. That is not necessarily risk management in the traditional form – but it is management of uncertainties, and done well, it will enable an organisation to deliberately leverage the very same volatility that is hampering competitors.

Few executives get the challenge of designing a business system from scratch. Most are employed to lead companies that already have an organisation, and a business system, and processes, etc. Hence, the challenge for the executive is not to start all over, but to gradually adjust the current business in order to ensure this match business conditions. The speed of change depends on the “mismatch” urgency, which may be significant.

Conclusions

A business system is a combination of structures, processes and systems. Together they form the basic design of how the organisation gets the things done needed to meet its aspiration and live up to its purpose.

Overall, the company needs to define their overall approach to the business system design, essentially great white shark or fish steam. Using compartmentalisation, they can combine the best of both worlds by

- Deploying a full control, i.e. “great white shark” approach for those processes and areas, where this is optimal for the company
- Deploy the full flexibility “fish steam” approach for areas and processes, where the need for flexibility is more dominant

The optimal design balances efficiency, effectiveness and adaptability on the overall level, as well as within the different elements of the business system allowing different functions and areas to be guided by different trade-offs.

Nothing lasts forever, and business systems need to change to meet the needs of the future in which they operate. To this end, risk management tools and processes are effective means to:

- Manage the risks and benefit from the opportunities of the business system today

- Timely identify needs for adjusting the business system and enabling a smooth and effective evolutionary development
- Timely identify options of leveraging relevant volatilities and there add strategic strength to the organisation

The element of being “timely” allows an organisation to continuously adjust its business system design to fit current and immediate near future needs.

This is not risk management as such, but it can be leveraging intelligent risk taking.