# Nexus Analysis – common sense is not simple

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When analysing the way organisations work, it is not uncommon to identify strategies that have lost their attachment to reality, as well as activities that swallow resources out of proportion to their relevance, or even that no longer make any sense to the enterprise. Maybe that is why management jargon has so many expressions like *align processes to strategy*, *focus on activities that add value*, *results driven*, and other ways to emphasize the need of coherence between established goals and what people are really doing.

Experienced managers are sometimes amazed at the lack of sense that can be found in part, or even in a whole organisation. To cope with such situations, consultants tend to prescribe simple, easy-to-learn recipes. After all, it is simply a matter of common sense! The problem is: common sense is not simple. If it were, there would not be so many companies in difficulties, so much demand for management consultancy, nor so many buyers of books whose titles include the word "how".

According to the Concise Oxford Dictionary, common sense is "normal understanding, good practical sense in everyday affairs". Although it is a knowledge driven by and towards action, common sense is not a specific know-how, but rather a general competence required to drive enterprises to desired ends. Besides maintaining coherence between actions and targets, a distinctive aspect of common sense is, maybe, to define achievable results. In short: we understand common sense to be the capacity to achieve compromise between desires and possibilities, and to develop practical activities according to it.

Our aim is not to present an essay on common sense, but rather to understand some of its manifestations in the business environment. We will be happy if, having finished this article, our readers agree that the subject is more complex than it appears at first sight.

## Principles

Let us start with a hypothetical case: walking past a room where there is to be a meeting, you notice that two participants are already there, far ahead of schedule. You say: "*You're very early! Why?*"
One of them replies: "*Because I have to read the report we are supposed to discuss.*"
And the other: "*Because today there were no traffic jams.*"

Imagine now what each of them would have replied if, instead of "*why?*", your question were "*You're very early! What for?*"
The first person would reply: "*In order to read the report we are supposed to discuss.*"
And the second: "*No reason. I arrived very early because there were no traffic jams.*"

Answering the question "*why?*" was no problem for either, but the question "*what for?*" narrowed the possibilities of an answer, as it pre-supposes that some purpose justifies the early arrival for the meeting. That is why the second participant had to start his reply by saying "*no reason*".

The meeting eventually begins, and the following dialogue is heard:
- *So sales have dropped. Why?*
- *Because we have raised the prices of our products.*
- *And why have you done this?*
- *Because raw material costs have increased.*

Let us see how this conversation would have been if, once more, we were to change the question:
- *So sales have dropped. What for?*
- *??!! You mean why, don't you? They have dropped because we have raised our prices.*
- *What for?*
- *In order to maintain our margin, because raw material costs have increased.*

The first "*what for?*" was not, again, an appropriate question, since there was no intention involved – the company certainly does not want its sales to drop! However, asking for what purpose the prices were raised yielded a better answer. The reply to the question "*why?*" left implicit the aim to maintain profit margin, but it should not, as the intention of the raise could have been something different: to increase margin, or to change customer perception of the product, in a branding strategy. Although it is evident that the company does not want its sales to drop, the intention of the price raise is by no means apparent.

Asking "*what for?*" presumes that there is intention in doing something, and that any later explanation, be it about the success or failure of what we did, is determined by that intention. Enterprises derive from human desires, so the fundamental justifications for doing something in an organization are intentional, not explanatory. Here we have a first principle: *the meaning of what is done comes primarily from "in order to", not from "because"*.

When actions are not coherent with the intentions of the one who does them, we say they lack *nexus*. Nexus, a property of each single action in a set of inter-related actions, expresses our focus when researching common sense (or its absence) in organizations. That is why we have called our approach *nexus analysis*.

**Nexus** [from Latin *nexu*]
harmonic linkage between situations, events or ideas; coherence

> **+ analysis** [from Greek *analysis*]
> determination of the elements that are organised into a totality

> > **= Nexus analysis**
> > determination of the relationships that give coherence to the actions of an organisation.

For example, in the case of a mining company, if we want to know the nexus of the action "*to verify compliance with environmental standards*", we should question its purpose. An answer would be "*to obey environmental laws*". Since the company does not exist to obey environmental laws, we must again ask "*what for?*"; this time the answer would be *in order to get and maintain operation licences from government agencies*. Asking a sequence of "*what for?*" questions, we would end up with the following intentional chain:

To verify compliance with environmental standards
> **in order to** obey environmental laws,
> > **in order to** get and maintain operation licences,
> > > **in order to** extract and process ore,
> > > > **in order to** generate revenue from processed ore selling,
> > > > > **in order to** achieve return on investment.

Every action in this private company must be part of one or more intentional chains that arrive at the action "to achieve return on investment", which is the company's *raison d'être*. Return on investment is the *nexus reference* for the actions of most private companies, even though many people are still convinced that the reason for the existence of, say, an automobile company is to make cars, not to provide return on investment to shareholders. Some companies state that a purpose beyond return on investment is their reason to exist, a statement that would require further analysis, which is out of our present scope.

Taking into consideration that government and non-profit organizations have other nexus references, i.e. other terminating points in their intentional chains, we favour a more general way of expressing this second principle of nexus analysis: *an action is justified only if it is part of some intentional chain that reaches the nexus reference of the organization*.

Analysing more in depth the above-mentioned chain, one could wonder if *achieve return on investment* is in fact an action. Who, in the company, does it? Nobody - profit is a desired outcome of a set of actions. It is a state of affairs or, as we prefer to call it, a *situation* targeted by the company.

For instance, the intention of the <u>action</u> *advertise product on TV* is the <u>result</u> *sales increase*. However, it is common to hear expressions like *advertise product on TV in order to increase sales*, although nobody is able to execute the "action" *increase sales*. The action *advertise product on TV*, if successful, will cause *sales increase*. For this reason, nexus analysis differentiates between **action** (*to advertise product on TV*), **situation** (*sales increase*) and **pseudo-action** (*to increase sales*). A pseudo-action is, therefore, a situation designated in an intentional chain as if it were an action. Describing a strategy or a process using pseudo-actions is no mistake (in fact, it is essential), but *it is necessary to distinguish between actions and pseudo-actions, because it is possible to intervene over actions, not their outcomes*. This is another aspect of common sense in enterprises, a third principle of nexus analysis.

Returning to the mining company, we have mentioned that it obtains operation licences, then extracts and processes ore, sells it, and finally remunerates investors. Would it be correct to say that *intentional chain* is only a complicated name for procedure, for the required precedence between actions?

The answer is no. Let us take as an example the mobile phone business: under post-paid contracts, the company first delivers communication services and then collects payment, so the overall procedure is *provide service → collect payment*. At first sight, this seems to be the equivalent of saying that the company provides service *in order to* collect payment (intentional relationships are expressed by the connective *in order to*). However, we have to remember that there are also pre-paid contracts: *collect payment → provide service*. The procedural chain is reversed, but, when collecting payment and later providing service, the company does not reverse its intention, as if it were to *collect payment in order to provide service*. Be it pre-paid or post-paid contract, the direction of the intentional relationship is always the same: provide service *in order to* collect payment *in order to* achieve return on investment, which is the reason for the company's existence.

Let us take another example in which procedure and intention follow different paths: in a manufacturing procedure, a worker produces a part, and the next step is a check by a quality inspector. This does not mean that the worker's intention in producing the part is to have it checked by the inspector; his intention should be to deliver a part in full compliance with pre-defined requirements, no matter whether there is or not a subsequent inspection. And what is the intention of the quality inspector? A possible answer would be to find defects in the part, but this would be equivalent to saying that, if no defects are found, the inspection has failed. In fact, the

inspector's intention is to ensure that the part complies with pre-defined requirements, which is also the worker's intention in manufacturing it.

Our experience with nexus analysis on complex processes, comprising dozens or even hundreds of different activities, has shown that intentions seldom follow the path of the procedural chains. That led us to formulate a fourth principle, which is additional evidence that common sense in organizations is not as simple as it may seem: *procedural linkage (meaning the place of an action in the sequence of a process or strategy) does not necessarily correspond to intentional linkage*.

When reasoning about common sense, it may sometimes look as though we are stating the obvious, such as when someone say that achieving return on investment is a nexus reference of every private company. However, it is not always obvious how certain actions are linked to this reference. Let us take a look at an actual case of corporate social responsibility: the mining company sponsors training programs for public school teachers and principals in the regions where it operates. What is the nexus of such application of shareholders' capital?

Initially, one has to take into consideration that mining businesses are grounded in deposits of ore, often have a lifespan of decades, and cause significant social and environmental impact. For these reasons, relationships with the community can be a crucial factor. In this specific case, operations are located in extremely poor areas in which government has not been able to set up acceptable educational, health and transport services. Social tension resulted in blockades that paralysed railways between mines and harbours, causing multimillion dollar losses per day.

The following diagram represents each action or pseudo-action as a graphic cell. Reading is to be done by connecting each cell's text to the texts in the adjacent cells to its right: vertical lines are connections, while horizontal lines isolate actions from each other; blank cells allow path branching. The diagram is a compact representation of twenty-nine intentional chains between *hire educational specialists* and *achieve return on investment*. We do not think this linkage to the company's nexus reference is obvious, especially since it is a social investment strategy fully integrated to the business, not altruistic.

**Corporate social responsibility: nexus of part of a mining company's strategy**

| Hire educational specialists, *in order to...* | train public school principals and teachers, *in order to...* | comply with operation license conditions, *in order to...* | | | obtain and maintain operation licenses, in order to... | | enable mining and transport operations, *in order to...* | | achieve return on investment. |
|---|---|---|---|---|---|---|---|---|---|
| | | provide high quality public education to employee children, *in order to...* | avoid isolation from community (if employee children went to private schools), *in order to...* | | retain employees, *in order to...* | | | | |
| | | | | increase quality of urban centres where employees live *in order to...* | | | | reduce capital cost, *in order to...* | |
| | | provide high quality public education to the whole community, *in order to...* | improve education levels of the communities affected by the company's operations *in order to...* | support development of wealth generating activities not dependent on the company, *in order to...* | develop good relationship with the community, *in order to...* | achieve local community approval (membership), *in order to...* | minimize business risks, *in order to...* | avoid losses, *in order to...* | |
| | | | | | reduce social impact of mine closing, in order to... | | | | |
| | | | | hire local people as employees or service providers, *in order to...* | develop good relationship with the community, in order to... | | add value to the Company's image, *in order to...* | attract investors, *in order to...* | |
| | | | | | reduce operation costs, *in order to...* | | | | |

**Strategies, processes, and structuring activities**

Sets of actions performed by organizations are almost universally addressed as *processes*, *strategies,* or *projects*, but there is no consensus on the meaning of these terms, particularly strategy. To define them in a way that suits nexus analysis, we need first to distinguish between *permanent* and *transitional assignments*.

Let us analyse the procurement process of a specific manufacturing company. Procuring is something that the organization has always had to do and did in several ways throughout its history: at first via face-to-face contacts with suppliers, then sending requests via fax, later e-mail, until an e-procurement system was set in operation. The "permanent" qualification of this assignment derives from the fact that the company always has and always will depend on a procurement process, and from the fact that, at any given moment, there is a defined way of doing it, which is valid until the next change.

Every time this company decided to change its procurement process, several actions became necessary. For example, in the change to *e-procurement*, computer hardware and software licences were bought, procedures were altered, and employees were trained. Those activities had a transitional nature: when finished, they were not succeeded.

A permanent assignment may be altered or replaced, but (with a few exceptions that prove the rule) never extinguished, while a transitional assignment <u>is</u> the improvement or replacement, so its existence is limited to the movement of some organizational aspect from a steady state to another. To paraphrase a saying by a Brazilian poet about passionate love, a permanent assignment "should be endless, while it lasts".

Now we can present our definitions:

o **Processes** are permanent assignments of the organization, comprising action chains whose purpose is to obtain a certain product or service, which are performed frequently enough to justify standardization of its sequence, decision points and allocation of persons responsible for each action. The organization usually has a significant level of control over most, or all activities in a process.

o **Strategies** are permanent assignments of the organization, comprising action chains that aim at certain results, and that depend significantly on the behaviour of agents who are not under the control of the organization, such as competitors, customers, and government. Therefore, strategy formulation is based not only on actions to be performed by the organization, but also on its expectations as to the intentions of third parties.

o **Structuring activities** are transitional assignments of the organization, comprising chains of actions that aim to deploy procedures, tools and other resources needed to perform processes or strategies. Structuring activities have a *project* nature, in the sense of having a lifecycle that ends with the attainment of a desired outcome. So, in the context of nexus analysis, the term *project* tends to have this more restricted meaning - transformation of some aspect of an organization.

To sum up: strategies, processes and structuring activities are sequences of actions that have in common the aim to serve the interests of the organization, but differ on repeatability (high in processes, variable in strategies, low in structuring activities), on dependence as to third parties' behaviour (low in processes, high in strategies, variable in structuring activities) and, finally, on

being permanent (processes and strategies) or transitional (structuring activities). To take as an example a TV channel:

o *To produce programs, to show programs* are processes.
o *To show a special short series of programs* is a strategy (expectations of the organization as regards third parties which are out of its control: audiences will increase, competitors will not have time enough to change their timetable, advertisers will agree to pay more).
o *To create a TV program database* is a structuring activity, a project.

**Mindsets**

One of our clients is a Brazilian federal agency in charge of private health insurance regulation. Besides rule making, this government organization is responsible for rule enforcing, which is accomplished by means of two processes: a reactive inspection process, triggered by customer complaints received by a call centre, and a pro-active inspection process, which selects a sample of health insurance companies every year.

There is no procedural connection at all between the processes, which are performed by separate departments. When we started the analysis, there was a huge and growing backlog of reactive inspections, while the proactive process seemed to be under control. A conventional performance improvement approach would have led us to recommend reallocation and hiring of resources for the reactive process but, after analysing the intentional chains, it became explicit how the two apparently independent processes were linked together. Reactive inspections are performed in order to protect individual customers from insurance companies' irregular behaviour, and to punish the latter in order to prevent further offences, both actions having as their nexus reference *to safeguard public interest in the health insurance market*. Proactive inspections are performed to inhibit and to correct irregular behaviour (this correction not necessarily being done via punishment, but via adjustment agreements), also in order to safeguard public interest in the health insurance market.

The very existence of the proactive process derives from an inhibition strategy, which is based on the expectation that companies will commit less or no irregularities when they realize that they may be chosen for an in-depth inspection at any moment. If successful in preventing irregularities, this strategy has as a side-effect the lowering of complaints, thereby reducing backlog in the reactive inspection process.

We realized that the availability of resources had been the reference in planning the number of proactive inspections to be carried out, which resulted in the wrong impression that this department's performance was all right. The awareness that the inhibition strategy provided intentional linkage between the processes led to better advice: measure the correlation between volume of proactive inspections and complaints received, increase resources for the proactive process accordingly, report proactive inspections to media to widen repercussion, hire temporary personnel to eliminate backlog, instead of adding more resources to the reactive process.

No conventional process diagram would ever show the action *inhibit irregular behaviour* – as it does not exist as a step in this organization's workflow. However, it would have to be included, as an expected outcome (pseudo-action), in a strategy diagram.

For nexus analysis there is no precise borderline separating process and strategy, since the essential difference is higher or lower dependence on the behaviour of third parties. Such difference is not radical, but one of degree. In practical terms, this means that process and strategy intentional chains have to interconnect to reach the nexus reference, or references, of a given organization.

Where this does not occur, there is a lack of coherence, which may be harmful to the organization's performance.

For this reason, we use the same set of concepts to assess strategies, processes and even structuring activities. There is no point in proposing alignment of processes to strategy, as there is no way of analyzing nexus separating one from the other.

So why designate a set of actions as strategy, process, or project? Why not simply call them procedures? The reason for not doing so is the need of a specific mindset for each type of action set.

Every strategy presupposes hypothesis about future actions of the organization that formulates it, as well as about future actions of the remaining agents in the business environment. For the strategy management mindset, the future is one among several possibilities of procedural and intentional chaining from the present situation. That is why strategy management requires explicit consideration of hypothesis and uncertainties, measurement to provide hypothesis validation throughout the execution of the strategy, as well as alternative action chains in case expectations end up by being incorrect.

For the process management mindset, the future is a continuity of dynamics of the past, due to less dependence on external factors. So, process management requires procedural standardization and definition of indicators oriented to internal actions (productivity, resource allocation, materials consumption). As the main concern is operational performance improvement, the fundamental reference is historical data about activities.

The transitional nature of structuring activities makes them troublesome, since organizations tend to structure themselves around their permanent assignments, particularly processes. The almost inevitable consequence is moving change management to the background. In organizations where decision making structure is determined by process structure, and whose process managers hold full responsibility for change management, those executives end up having an operations agenda and an operations structuring agenda. No matter how much they agree on the high priority of the latter, they will focus on the former. A typical example is ERP implementation, in which very often there is no internal management group focused solely on such a massive change.

The predominance of the process mindset in business culture occasionally leads to another mistake, which is the design and management of strategies as if they were processes. Its extreme manifestation is: single procedural/intentional chain, non explicit hypothesis mainly based on operational history, and no proper measures to validate them throughout strategy execution. In less formal terms: no plan B because, for reasons so familiar to us that we can disregard their assessment, the future will confirm past trends.

**Guidelines**

So far, we have outlined principles and reasoned about the nature of strategy, process and structuring activities according to nexus analysis. It is time to talk about how to put this approach into practise. We recommend the following guidelines.

*1. Proceed from ends to means*
   Macchiavelli stated that the end justifies the means. For nexus analysis, the end is the source of meaning of the means, so one should start by defining the nexus reference of the organization. In government and non-profit organizations, nexus reference may not be easy to define, so it may

be better to adopt a first definition and move ahead to strategy and process analysis in order to acquire more knowledge and then review the nexus reference.

### 2. Make sure expectations and desires are made explicit

When drawing intentionality diagrams, it is essential not to focus on procedural chains, but rather on the intentional chains that are comprised in each strategy; in other words, to check whether the connections between statements are really "*in order to*". It is also important to avoid big "conceptual jumps" between statements by identifying intermediate desired outcomes; for instance, in the corporate social responsibility example, it would be obscure to state that the hiring of educational specialists is done in order to minimize business risks. Strategy usually includes plenty of pseudo-actions that would hardly be mentioned in process analysis – make them explicit.

### 3. Link processes via intentional chains

Conventional process models are essentially a set of procedural chains but can be used as a starting point for nexus analysis. One should walk through each process asking "*what for?*" with regard to every single action, and depicting the intentional chains until they reach the nexus reference. Maybe some do not, which is a sign of problems either in the process or in the strategy. The level of detail may vary a lot, depending on the purpose of the analysis and on the complexity of the processes, but every single activity should have at least one intentional chain leading to the organization's nexus reference. Quite often there is a need to add pseudo-actions to obtain clear and meaningful intentional chains. We have created a specific notation for such diagrams, which is an extension of conventional process modelling techniques, but its presentation is beyond the purposes of this article.

### 4. Manage change management

The definition of structuring activities required to accomplish changes in the organization is an outcome of nexus analysis and must comply with the same principles adopted for strategies and processes. That means to check whether there are explicit intentional links from every structuring activity to the strategies and/or processes to which it is related. Depending on how process oriented the organization's mindset is, and also on the volume and complexity of the change program, consideration should be given to allocating a change management team not responsible for any operational activities.


**Common sense *cuisine***

So, after criticizing recipes in the introduction, did we end up offering you our own? Not really. Recipes are methods, i.e., procedure specifications: do this, then do that, followed by the other, and you will get what you want. We have outlined nexus analysis not as a *method*, but as a *methodology*, a set of principles and guidelines based on the concepts of intentional and procedural relationships established between actions and/or situations. A methodology is the study of methods related to a specific context - it is a conceptual *cuisine*, not a recipe. Extending this metaphor, we would say that highly competent managers are common sense *chefs*, not cooks.