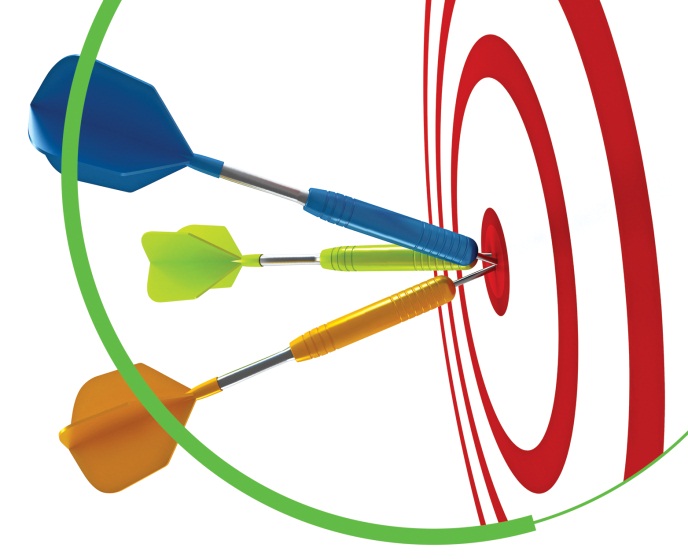
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**SMART or not: are simple management recipes useful to improve performance in a complex world? A critical reflection based on the experience of the Flemish ESF Agency.**

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The Flemish European Social Fund Agency is responsible for deploying financial means received from the European Commission, co-financed by the Flemish government, mainly to support the functioning of the Flemish labour market as well as stimulate social inclusion. This Agency is in a unique situation as it is being pressured to improve its performance simultaneously by the European Commission and the Flemish Government.

In the case of the European Commission (EC), a programme is negotiated that contains a number of priorities to which the funding is allocated for a seven year period. In the current programme which started in 2007, the main priorities are labeled “activating talent”, “giving opportunities to work” and “entrepreneurship with people”. The new period will start in 2014. For this new period, new regulations have been devised[[1]](#footnote-1) that comprise the following elements:

* defining for each priority axis in the programme indicators to track performance of the priority where various types of indicators are to be formulated:
  + financial indicators relating to expenditure allocated;
  + output indicators relating to the operations supported within a priority;
  + result indicators relating to the priority that should be:
    - robust: reliable, that means analytically sound, correct and statistically validated;
    - normative: having a clear and accepted normative interpretation (i.e. there must be agreement that a change towards a particular direction or its opposite is a favourable or an unfavourable result);
    - responsive to policy: linked in as direct a way as possible to the operation or priority axis for whose monitoring they are used;
    - the data for these shall be:
      * collected in a timely manner: data needs to be collected so that they are available to allow the managing authority to fulfill all reporting obligations vis-à-vis the Commission as well as the Monitoring Committee;
      * publicly available: data should be made publicly available at the lowest level of aggregation that is allowed under data protection rules;
* ideally, these indicators should draw on the common output and result indicators provided by the Commission (with specific indicators forming a sub-set of the common indicator) although there is no obligation to do so; in any case, the common indicators are to be reported on across the board for all priorities even if they are not selected as programme indicators (for steering the programme);
* setting intermediate targets (milestones) for a selection of these indicators (for 2018) and a final target (for 2022) relative to a baseline;
* achievement or the lack of it, can be rewarded (with an allocation of a 5% performance reserve in 2019) or punished (suspension of payment in 2019 based on the milestones 2018 and even financial correction when closing the programme).

At the same time, the ESF-Agency has to negotiate a “cooperation agreement”[[2]](#footnote-2) with its relevant minister(s) in the Flemish Government. The guidelines of the administrative reform programme[[3]](#footnote-3) that governs the use of such an agreement state that the mission of an Agency should “be conducive to being formulated in a sufficiently stable and SMART (specific, measurable, agreed, realistic, time-related) way.”[[4]](#footnote-4) Senior government managers are held accountable for their results every six years. They do receive considerable autonomy in reaching these results[[5]](#footnote-5).

Although the EC does not use the term “SMART”, it does request that targets for priority axes are set relative to a baseline using robust and responsive results indicators and that the data is collected in a timely manner. This covers broadly that objectives have to be specific, measurable and time-bound. Whether these targets should be agreed or realistic is not explicitly addressed but can be assumed to be part of the negotiation process that will be conducted between the Agency and the EC.

**The Agency is therefore confronted with two actors who, explicitly or implicitly, require to govern their relationship in a “SMART” way. But how smart is this really? Is the seemingly straightforward combination of SMART objectives, with measurable tending to refer to quantitative measurement, and attaching consequences to the (failure) to achieve them (explicit in the EC case, more implicit at the Flemish level) a proven concept to guarantee “steering of effectivity, performance and quality”[[6]](#footnote-6) or to “strengthen the focus on performance and the attainment of the Europe 2020 objectives”[[7]](#footnote-7)?** This paper will explore this issue by drawing on a variety of research results and conceptual thinking.

The early days of SMART

First, it may be to useful to determine where the idea of SMART came from in the first place. The article that may have been the first to use this acronym was written by consultant G. Doran in 1981[[8]](#footnote-8). He defined it as follows:

* specific: target a specific area for improvement;
* measurable: quantify or at least suggest an indicator of progress;
* assignable: specify who will do it;
* realistic: state what results can be realistically achieved, given available resources;
* time-related: specify when the results can be achieved.

“Assignable” shifted to “agreed” -as used in the Flemish acronym- presumably to avoid too much of a “top-down” connotation. However, more interesting than the acronym itself is that Doran states in the article “…don’t say that all objective must be quantified at all levels of management. In certain situations, it is not realistic to attempt quantification, particularly in staff and middle management positions… It is the combination of the objective and its action plan that is really important.” Doran seems to be making a case that SMART is most useful when applied at a level where action plans are actually formulated and put into effect. Indeed, he also states that “Practicing managers and corporations can lose the benefit of a more abstract objective in order to gain quantification.” Regrettably, Doran is not more explicit on what constitutes this benefit. This point will be addressed further in this paper.

Although the article by Doran was not citing any relevant research, the idea of SMART can be said to have some academic history pre-dating it. An article that refers to most of the elements, without actually using the acronym, was written as early as 1965 by A. P. Raia[[9]](#footnote-9). He describes the implementation of a management system in a specific corporation that had the following characteristics:

* subordinates should be able to participate with their superiors in “tangible” goal setting in respect of their own performance in all areas of their responsibility;
* subordinates should be given directly the information to enable them to compare their actual performance with the goals set and thus control their own performance. This enables them to identify and remove obstacles at periodic performance reviews. They report the corrective action they take to their superiors;
* the role of a supervisor is one of consultation and review to ensure the goals are realistic and consistent with overall objectives.

The first point can be said to correspond to being “specific, measurable, assigned” whereas the second one is linked to “time-related” and the last one to “realistic”. Major advantages of the system were reported to be:

* better integration of short term objectives of the company by translating them into specific goals tied to a completion date;
* systematically identifying obstacles and developing solutions to them, especially during the periodic reviews;
* simplification of the evaluation of individual performance based on measurable or verifiable objectives as opposed to personality traits;
* increased upward communication (to staff and higher level management) due to the periodic reviews and the face to face relationships they helped establish.

However, some problems were also noted:

* the philosophy of growth for the individual stated to be the foundation of the system had not reached the lower levels of management. In connection to this, the possible subversion of the system was noted in the sense that, absent the proper philosophy, it would become just a tighter system of control of upper management, “a whip in the hands of those who choose so” (p. 49). Connected to this, it was observed that at lower levels (line managers and foremen) participation had meant that informal contacts had improved but no real authority had been delegated to spend more time on assessing the external environment and planning;
* paper work increased considerably and some data seemed to be generated for its own sake;
* goals levels were decreasing in the company whereas the article states that to motivate the individual and stimulate creativity, these should be both challenging and realistic;
* in connection with the motivation to perform, the article also noted that seemingly most of it “was generated by the desire to look good…based upon more than monetary benefits…such as competition, recognition and personal pride in accomplishment” (p.43) without noting that this was a problem as such;
* it was stated that it is much more difficult to set measurable goals in areas other than production. Again, it was asserted that “Goals need not be measurable, providing they are verifiable. Any goal which is tied to a completion date is verifiable and, as such, can provide the same benefits… as the measurable production tool.” (p. 50).

**This early article brings some very interesting issues to the fore that are associated with larger subsequent research streams that will be covered more in detail throughout this paper:**

* **that to motivate both challenging and realistic goals may be required;**
* **that gaming and cheating may happen (apparent in the lowering of goal levels) as well as other forms of unintended behavior (e.g. supervisors exerting more control on, rather than support, personal growth of their subordinates)**
* **that motivation may be linked to something other than financial gain, ranging from competition to personal pride;**
* **that what may matter may be verifiability (associated with a deadline) not quantitative measurement, given also that some goals may be harder to measure in the latter way.**

Goal setting theory: goals matter for performance

The first point is associated with the research stream that goes under the heading of “goal setting and task motivation theory” associated with mainly with E. Locke and G. Latham who developed the theory over a 25 year period with more than 400 laboratory and field experiments (Locke et al 2006a[[10]](#footnote-10)). Latham et al (2002) identify the following elements[[11]](#footnote-11):

* specific -defined earlier in Locke et al (1981, p. 126) [[12]](#footnote-12) as “the degree of quantitative precision with which the aim is specified”- and difficult task goals lead to higher performance than urging people to do their best:
  + first, this is because goals direct effort and attention to goal relevant action and away from irrelevant ones. This gives rise to the observation that in the face of feed-back, people improve their performance only on those dimensions for which goals had previously been set;
  + second, goals have an energizing function, with higher goals prompting to spend more effort;
  + third, goals affect persistence of effort (working faster and more intensely in a short period of time or more slowly and less intensely for a prolonged period);
  + finally, goals affect action indirectly by discovery and/or use of task relevant knowledge and strategies, where people will either automatically (without thinking about it) use applicable existing knowledge and skills, draw upon knowledge and skills used previously in related contexts, strategies they have been trained in or engage in deliberate planning to develop appropriate strategies to cope with a new task. In the latter case, there may be a time lag between setting a goal and higher performance as people search for the right strategy. Seijts et al (2005)[[13]](#footnote-13) add to Latham et al 2002 by providing an example of “working smarter, not harder” (p.125) concerning the use of existing competencies regarding radio use by truck drivers to coordinate their efforts better;
* it should be also noted that research by Klein et al (1990)[[14]](#footnote-14) tested and confirmed the hypothesis that higher specificity, while holding difficulty level constant, translates into higher performance;
* Latham et al (2002) state that an exception to this hard, specific goal and performance relation occurs when people have been trained in wrong strategies. Then, it is better to have an easy goal. This makes sense as, in this case, people triggered by a specific, hard goal will be putting extra effort in doing the wrong things.

There are also some conditions that moderate the link between goal setting and performance according to Latham et al (2002):

* the relation is stronger when people are committed to their goals. This commitment is in turn facilitated by two groups of factors:
  + those that increase self-efficacy (confidence that one can achieve a goal) which can be raised by leaders e.g. by:
    - ensuring adequate training to increase mastery to provide success experiences;
    - role modeling;
    - persuasive communication that expresses confidence that the person can attain the goal and gives information on relevant task strategies to do so. When assigning a goal (rather than letting someone set their own goal) to someone implicitly expresses this confidence, then this has a similar effect of raising self-efficacy. Related to this, positive feed-back (see below) positively affects self-efficacy;
    - incentive systems may lower self-efficacy (see below);
  + those that convince people of the importance of a goal e.g.
    - by making a public commitment to the goal;
    - by having leaders communicate an inspiring vision and behaving supportively;
    - by allowing subordinates to participate in setting goals. It is however stated that assigned goals are as effective as goals set participatively, provided that the assigned goal is accompanied with a purpose or rationale (versus a “Do this…” command). The benefit of participation is reported to be cognitive rather than motivational as it stimulates information exchange relating to task strategies (already mentioned above). Locke et al (2006b)[[15]](#footnote-15) add that this in turn increases self-efficacy;
    - by using monetary incentives where more money gains more commitment (Latham et al (2002)). Locke et al (2006b) adds that praise and public recognition like money exert an effect on performance by leading to more commitment. However, the way incentives are deployed is very important. The article mentions how a task and bonus system (where a bonus is paid when an absolute level of performance is reached rather than paying for increments) negatively affects self-efficacy and hence performance when people realize they will not be able to achieve a goal;
* Latham et al (2002) state that the relation is also stronger if feedback is given that reveals progress in relation to the set goals:
  + if people find out they are below target, they generally increase effort or try a new strategy as goal setting is a discrepancy creating process;
  + however, the existing level of self-efficacy of a person is key when receiving negative feedback as it will determine if subsequent goals are lowered or raised. Positive feedback of course positively affects self-efficacy;
  + if people are given feed-back without any pre-set goals, they will be setting goals in response to the feed-back. This ensuing goal setting –if hard and specific- then provides a link to performance, not the actual initial feed-back;
* higher self-efficacy also is linked to setting higher goals in the first place (which was also stated above to be an effect of participative goal setting via the mechanism of information sharing) and a greater ability to find and use task strategies, constituting two extra elements next to the aforementioned moderation of commitment and the response to feedback. Locke et al (2006b) add that praise and public recognition affect setting higher goals and hence performance because they affect self-efficacy (as a feed-back mechanism) next to affecting commitment as stated earlier;
* importantly, according to Latham et al (2002), when the limits of ability are reached, the relation between high specific goals and performance levels off or inverts;
* Seijts et al (2004)[[16]](#footnote-16) also add situational constraints as moderators and mention that there is controversy regarding whether goals are better predictors of action than are personality traits. Inconsistent findings may be due to goals being a strong variable that attenuates the effect of personality variable as they provide cues to guide behavior and performance expectations that leave little room for variation in work behavior and subsequent performance. An example of a situational constraint is role overload (excess work) as reported in Lock et al (2006b).

So why would people want to set specific high goals for themselves in the first place? Locke and Latham (2002) state that setting and attaining such goals brings many psychological and practical outcomes some of which are pride in performance, future benefits such as an excellent job or life benefits such as career success etc. Curiously, expected satisfaction with performance is lower for people with high goals. This is purported to be because people that set high goals are dissatisfied with less. On the other hand, Latham et al (2006b) state that the greater the success in attaining goals that are deemed important, the greater the individuals’ actual realized subjective well-being. In addition, high goals can relieve boredom by providing a sense of purpose or meaning which itself brings the pleasure associated with being purposeful. As Locke et al (2006b, p. 334) state “A goal can provide meaning to an otherwise meaningless task”.

But a few caveats apply to goal setting: it is oriented to individuals and complex tasks require learning goals

This brings us to two major caveats associated with goal setting theory: that it applies at the level of individuals rather than organisations as a whole and that it requires thinking about learning objectives for more complex tasks. These caveats are treated next in more detail.

First, it is a theory applicable at the level of individuals of an organization, referring to specific tasks they are supposed to execute. Goal setting theory was not developed to be used at the level of an organization as a whole. If an attempt would be made to extrapolate this theory to the organizational level, it would run into trouble when trying to satisfy the requirement to set goals that take into account ability and situational constraints –hence that are hard but realistic. It is virtually impossible at the top of the organization to be able to gauge the ability and situational constraints that are applicable to all the people and all tasks. Trying it anyway would inevitably result in arbitrariness for many people. Ordonez et al (2009, p. 15) support this position when they say “Given the variability of performance on any given task, any standard goal set for a group of people will vary in difficulty for individual members, thus the goal will simultaneously be too easy for some and too difficult for others”[[17]](#footnote-17). Of course, it could be argued that the organization wide objectives are assigned to or “owned” by the CEO. But this would disregard the nature of the tasks that the CEO actually executes. The CEO does not him/herself e.g. produce any products or services personally. In fact, many of the tasks of the CEO are of a regulatory nature. Hence, CEOs should set specific, hard targets for themselves towards how well they are doing their regulating tasks, but not towards what their organization actually produces or delivers to clients.

A second caveat is that there is an important exception to the relation between hard, specific goals and performance, according to Latham et al (2002): when people are confronted with a task that is complex for them, a vague goal sometimes leads to better strategies. This is stated to be because performance goals relating to complex tasks can create so much anxiety that people scramble to discover strategies in an unsystematic way and fail to learn what is effective. It is also stated that in dynamic situations, it is important to actively search for feed-back and react quickly to it to attain the goal.

This issue is further researched in a number of publications notably Seijts et al (2004 and 2005) and Latham et al (2006b).

Seijts et al (2004) state that goal setting theory, having its roots in organizational psychology, has been concerned with motivation and hence the tasks used in the research have tended to be straightforward. They require primarily effort and persistence, with ability to execute being pre-established. The importance of ability as a moderating variable was already noted above. However, educational psychology has been much more interested in ability as such and has studied tasks that are complex, where the focus is on acquisition of knowledge and skill. Therefore we need to add as a moderating variable also the complexity of the tasks for which goals are to be set.

Seijts et al (2004) restate that for complex tasks, where people lack knowledge or skill to perform the task effectively, urging them to set a specific, high goal leads to a decrease of performance rather than an increase. They put forward that this is because before performance routines become automatic, cognitive resources have to be allocated to mastering the task rather than to attaining a specific level of performance. This is a slightly different explanation than the one of increased anxiety offered by Latham et al (2002) but it is not inconsistent. Rather, a failure to allocate sufficient resources to mastery may well result in anxiety. Both arguments are restated in Seijts et al (2005). It should also be clear, as stated in Seijts (2005), that when people do possess the competences to enable them to “work smarter, not harder”, when faced with a complex task, goal setting still stimulates finding appropriate strategies, as was already reported above by Latham et al (2002).

Seijts (2005, p. 126) state that “performance is a function of creative imagination or learning, in addition to sheer effort and persistence. This is particularly true on tasks where the person lacks the requisite knowledge or skill to master it.”

A key concept in this regard, coming out of educational psychology, is the “goal orientation” of people of which two varieties exist:

* a performance goal orientation: people with this orientation have a strong need to impress and hence choose tasks that enable them to demonstrate their existing competence at the expense of learning something new. These people view their abilities as something fixed and hence will avoid seeking feed-back in fear of criticism. This orientation can be further sub-divided into two sub-orientations:
  + prove goal orientation: focus here is on demonstrating competences to gain favorable judgement of others;
  + avoid goal orientation: focus on ways of avoiding negation of one’s competences and/or unfavourable judgements of others;
* a learning goal orientation: here people seek tasks that provide them with the opportunity to develop their competencies and ensuing master the task. Errors are perceived by them as a natural, instructive part of the process. This means that when they make errors, these actually increase self-efficacy. For these people, feed-back is important as it suggests ways to improve abilities.

It should be clear that none of these goal orientations imply that people set specific, hard goals. In fact, people with a performance goals orientation may even want to set lower goals to have more certainty in receiving favourable or avoiding unfavourable judgement. In educational psychology, goal orientation refers to either a personality trait or an induced mind-set. The concepts of goal orientation as used in goal setting theory rather denote the existence of different kinds of goals: those that emphasise performance versus those that emphasis learning.

Seijts et al (2004, p. 229) states: “…tasks that are novel or complex for an individual often require attentional resources for learning what is required to perform well”. Seijts et al (2005, p. 127) add that “tasks for which minimal prior learning or performance routines exist, or tasks where strategies that were once effective suddenly cease to be so, relocate the purpose of or benefit of goal setting from one of primarily motivation to that of knowledge acquisition, environmental scanning, and seeking feed-back”. Locke et al (2006b, p. 334) state “Meta-cognition is particularly necessary in environments with minimal structure or guidance”. Meta-cognition refers to processes where people generate solutions to an impasse, implement them and monitor their effectiveness.

Locke et al (2006b, p. 334) also state “…a learning goal shifts attention to discovery and implementation of task-relevant strategies or procedures and away from task-outcome achievement”. Of course, this also means that “for tasks that a person already has the requisite ability to perform effectively, a learning goal that needlessly focuses attention on discovering strategies… has a deleterious effect on performance”. The former case focuses on acquisition of ability, the latter should rather focus on motivation.

However, in both cases, the research supports that setting a specific, hard goal is associated with higher performance. A performance goal would e.g. ask to attain 21% market share (a complex task) versus a learning goal that would ask to identify and implement 6 strategies to achieve a higher market share, as stated in Seijts (2004). It should be noted that in the learning goal, the level of market share to be achieved is not quantified, only the amount of learning is. Seijts et al (2004) put forward that the research in this case shows that more effort is spent on the learning goal than on the performance goal. This is demonstrated to be because commitment to the learning goal was higher due to higher self-efficacy which in turn was due to the fact that those going after the performance goal were not achieving it, while those oriented to the learning goal were. The relation between feed-back and self-efficacy was already noted earlier. Higher self-efficacy was also reported to relate to higher information seeking and this was in turn related to higher performance.

Locke et al (2006a) also reports that specific, hard learning goals enhance performance relative to vague goals, regardless of the goal orientation as seen as a trait. However, if a person sets hard, specific learning goals and is learning oriented, then performance is best.

As to the practical applicability of the concept, Seijts et al (2004, p. 237) state that “the primary benefit of learning goals…may be in fast-changing organizational environments and industries that are prone to abrupt changes and in which effective strategies can quickly become obsolete”. Seijts et al (2005) provide more concrete examples of situations where learning goals may prove more useful than performance goals:

* when learning about a changing environment, refining business strategies and discovering ways to improve and developing leadership;
* when setting goals for new employees, to direct them towards discovering how to execute various aspects of their job;
* to focus attention on finding ways to manage myriad social identity groups so as to minimize rigidity, insensitivity and intolerance within a multicultural task force e.g. when forming new teams;
* when rotating employees within the organization, providing them with opportunities to get out of their comfort zone.

Locke et al (2006b) also note that performance goals may have an adverse effect on risk-taking if failure to attain hard, specific goals is punished. The proposed solution is to provide for opportunities to make mistakes and to encourage learning from error. Hence this implies setting learning objectives to keep attention away from ourselves (“how can I be so stupid to make an error”) towards the task. In addition, for learning goals, an appropriate time horizon (spanning perhaps years) is required. This should lead to repeated setting of high learning objectives rather than to less difficult or vague goals.

**And some more caveats…**

Next to the theory being applicable primarily to individual rather than organisational goal setting and the need to take into account learning objectives, Locke et al (2006b) note some other difficulties and provide some suggestions towards resolving them. It should be noted that this article does not provide references to any research although it cites some examples to support each point:

* when individuals work in groups, conflicts between individuals in terms of their goals can decrease the performance of the group as a whole. When goals are viewed as competitive, people are more likely to withhold information and ideas from others. The proposed solution is to set a superordinate goal or vision. This is then to be made more concrete by specific, hard goals. According to Locke et al (2006a) when groups set goals like this, this increases sharing of information where sharing is again related to higher performance;
* the way goals are formulated matters: if they are framed as a threat (do not mess up) rather than a challenge, performance drops. The proposed solution is to frame a goal positively;
* high satisfaction due to goal attainment leads to increasing self-confidence and setting even higher goals. But this can then lead to dysfunctional persistence of previously used strategies if there is a radical change in the environment. Two solutions are proposed:
  + in dynamic situations it is critical to actively seek feed-back and react quickly to it. Errors are reduced by reducing a distal goal to proximal sub-goals allowing for an increase in information feed-back relative to only a distal goal;
  + constructive conflict should be promoted to find flaws in a proposed decision. People should be rotated in and out of this role to avoid losing their credibility;
* closely related is the risk that people tie their self-esteem to goal attainment. This leads to putting the goal as such above reality and reason. Whereas the former problem related to dysfunctional persistence of strategies, this one relates to dysfunctional persistence of the goal itself. The proposed solution is to maintain a willingness to adapt among people. Ordonez et al (2009) report a list of warning sings in leaders that become excessively fixated on goals. They associate goals with destiny, express an idealized future, offer goal-driven justifications and attempt to engage in face-saving behavior;
* as performance gets progressively higher, it gets progressively more difficult to further increase it. High performers may be punished for their past performance with goals that become impossible to attain. The solution is to allow high performers to set their own goals and strategies to attain them;
* when money is tied to achieving goals, some people will engage in unwanted behavior e.g. overstate their performance (especially if close to the goal). The proposed solution is:
  + do not punish managers as long as some minimum (not hard), standards are respected. These minimum standards should be formulated respective to an agreed upon competitor;
  + use a continuous linear bonus system (based on increments of performance rather than absolute level) as was already suggested earlier;
  + where comprehensive metrics are lacking, judgment on the part of a panel of subject matter experts is required, that explicitly takes into account performance dimensions for which no goals were set (e.g. ethical behavior);
  + furthermore, organizational control systems should be in place and unethical employees should be fired;
* non-goal performance dimensions may stay ignored. The proposed solution is that if these dimensions matter, there should be goals relating to them. The latter solution may however lead to another problem: proliferation of goals rather than keeping them to a manageable number suggested to be between 3-7. It is therefore not a very practical suggestion.

It should be noted that Ordonez et al (2009) wrote a paper with a large variety of criticisms towards goal setting theory. However, a response to this by Locke et al (2009)[[18]](#footnote-18) stated that many of the criticisms had already been noted by goal setting theory as is also supported by the above list. Therefore, only those criticisms which were not identified yet in the current article will be presented, even if these criticisms may already exist in the wider goal setting theory literature:

* obviously, when the wrong course is charted by setting the wrong goals or when the wrong time horizon is set (e.g. a focus on the short term creating myopic behavior in terms of the longer term) this may constitute a problem relative to setting no goals. Considering the setting of learning goals, managers may have difficulty in determining when it is appropriate to set them, and even if they can, they still need to determine the the specific, hard level. These criticisms relate less to goal setting theory as such but rather to the difficulty in setting the advocated specific, hard goals “correctly”. Goal setting theory offers little advice in this respect, other than to set realistic goals (meaning it must be clear how they will be attained), consistent with higher level superordinate goals;
* people tend to perceive their goals as ceiling rather than floors (they will “rest” after the goal is achieved);
* when people have multiple goals and these are a mix of quantitative and qualitative goals, they will tend to focus more on the quantitative ones;
* specific hard goals stimulate riskier behavior leading also to more impasses in negotiations. However, a stated earlier, punishing failure leads to risk aversion;
* while an ethical organizational culture can reign in harmful effects of goal setting, at the same time, the use of goals can influence this culture as well by creating a focus on ends rather than means and hence making it harder for employees to recognize ethical issues and easier to rationalize unethical behavior.

From goal setting theory to SMART?

This concludes the overview of goal setting theory. A discussion is now in order relating to the research question: “how smart is it to set SMART objectives?” In order to do this, let us reconsider the findings from the Raia (1965) study, purported to be a precursor to the SMART acronym as espoused by Doran (1981), in the light of goal setting theory and what this means for the ESF Agency that is confronted with the demand to have such SMART objectives.

First, clearly, the research suggests that specific - quantitatively precise-, difficult task goals lead to higher performance than urging people just to do their best. This seems to cover the notion that a goal should be “specific”, “measurable” and time-bound”. It favors the variation where “measurable” is reduced to quantitative measurement rather than encompassing the broader concept of verifiability as proposed by Raia (1965). That this interpretation triggers some problems will be explored more fully below when considering the research stream relating to measurement.

Second, the theory also takes into account the need to be “realistic” by putting forward that the relation between harder goals and higher performance is moderated by ability and situational constraints. In other words, how high the goal should be set is limited by what people are able to do and what their environment allows them to do. Seijts et al (2005, p. 124) strongly assert that “The assignment of ambitious goals without any guidance on ways to attain them often lead to stress, pressures on personal time, burnout, and in some instances unethical behavior. It is both foolish and immoral for organizations to assign stretch goals, and then fail to give employees the means to succeed, yet to punish them when they fail to attain the goals”. This is consistent with the statement by Doran (1981) that the combination of an objective and an action plan is what really matters.

Third, closely linked to this, the applicability of the concept is primarily at the individual level. Superordinate goals or visions at a higher level are to be translated into more concrete specific, hard goals at the level of an individual. This may well illuminate the usefulness of the idea that keeping more abstract objectives can be beneficial as put forward by Doran (1981) earlier in this paper. While more abstract goals set at an organizational level will not themselves increase performance, they can be translated in a consistent way (avoiding formal goal conflicts) at the individual level into specific, hard goals, relating to the specific tasks individuals actually have to execute. In this way, the notion of “assigned” is taken on board.

Fourth, the kind of goal under consideration was demonstrated to be very important. Specific, hard learning goals are to be distinguished from performance goals. The former are more appropriate for “complex” tasks where knowledge and skill has to be acquired versus the latter where the requisite knowledge and skill to reach the goal are already present. This is yet another form of being “realistic”. However, it was noted that it is not automatically clear in practice what kind of objective should be set.

The need to translate superordinate goals to the individual level in a way that is appropriate (taking into account whether a learning goal needs to be set or whether a performance goal has to be set and how hard these should be to remain realistic) support the idea of a supervisor that helps an individual in setting goals, as reported by Raia (1965). This is also where the usefulness of participative goal setting comes in as it increases information sharing on task strategies (which in turn affects self-efficacy). It also favors the more short term orientation of goal setting, in the context of performance goals, as proposed by the latter author. It should however be noted that for learning goals, adequate, longer term, time lags were to be foreseen. The need to be “time-bound” is differentiated according to the type of objective.

Fifth, the importance of feed-back is noted. If expressed positively (as progress towards a goal or as praise and public recognition) then it positively affects self-efficacy and hence also commitment. However, if expressed negatively, it reduces self-efficacy. Especially in dynamic situations, it was reported that it is important to actively search for feed-back and to react quickly to it to attain the goal. This supports the idea by Raia (1965) that feed-back concerning goal attainment, should be focused on identifying obstacles and removing them, hence strengthening self-efficacy. Therefore, it seems that only those people that can help identify and remove obstacles should be involved in the use of feed-back, as was the case with the groups involved in the periodic reviews as reported by Raia (1965).

**To conclude this section, the implications for the situation of the ESF Agency are discussed.**

**It is clear that the requirement to set quantitative targets at the level of the Agency, as required by both the EC and the Flemish government is not supported by the research. Rather, more abstract superordinate goals should be set for the organisation and supervisors should, consistent with these objectives, engage in a participative process with their subordinates to decide what kind of objectives to set –learning or performance- relating to the tasks they are supposed to execute and how high the ambition should be, given their abilities and situational constraints. This of course leads to serious questioning of the appropriateness of the EC holding the ESF Agency accountable for reaching labour market and social inclusion targets as stated in the programme the Agency is charged with.**

**For dynamic environments and complex tasks, such as trying to influence –mainly with money- a variety of actors on the Flemish labour market to tackle problems such a youth unemployment, learning objectives would be expected to be very much in use. However, we observe that the EC is rather requesting performance targets which is in conflict with goal setting theory.**

**It should also be clear that there is no guidance coming from goal setting theory that can guarantee “correct” objectives, neither in terms of setting the level of ambition, nor in terms of deciding the type of objective or even the content of the objective or the strategy to achieve the objective. At best, a test of consistency of specific, individual level goals with higher level abstract goals can be conducted as well as a test of realism, by gauging the likelihood that discussed strategies will lead to the attainment of the goal, without providing certainty.**

**Finally, the discussion on the positive use of feed-back, involving those who can help remove obstacles can also be contrasted with the situation of the ESF Agency where measurement is used by the EC and the Flemish government foremost to provide negative feed-back without any notion how these actors could help address obstacles. In fact, given the dynamic environment, the yearly review processes used both by the EC and the Flemish government are ill-suited to such a process anyway as they would not be frequent enough to allow the necessary rapid reaction.**

What we measure is what gets done, including by gaming and cheating

As we have addressed the first of the four main issues raised by Raia (1965), namely that that to motivate both challenging and realistic goals may be required, we should now turn to the issue that that gaming and cheating may happen as well as other forms of unintended behavior. In doing so, we will expand on the issue already note above by Locke et al (2006b) that non-goal performance dimensions stay ignored. It is also connected to the issue raised by them that tying monetary incentives to goal attainment may lead to unwanted behaviour. Finally, this is also connected to the issue raised by Ordonez et al (2009) that the use of goals can influence culture by creating a focus on ends rather than means and hence making it harder for employees to recognize ethical issues and easier to rationalize unethical behavior. It also concerns the issue they noted that people tend to perceive their goals as ceiling rather than floors.

These issues are discussed in a research stream that focuses more on measurement issues and their consequences for setting targets in relation to the public service. In this sense, the focus is on the “measurable” part of the SMART acronym.

A comprehensive review of the literature and available evidence provided in 2010 by the Economic and Social Research Council (ESRC) in the UK[[19]](#footnote-19) lists two assumptions to making a target system work: first, measurement problems are not important in the sense that the quantifiable performance indicator adequately represents overall performance. Second, that the system is not vulnerable to gaming. It then states (p. 22): “There is some evidence that targets and such “carrots and sticks” work, particularly if the desired outcome is focussed and measurable, as in the case of hospital waiting times. The two assumptions underlying such governance structures don’t hold for public service delivery, however: measurement error is an inherent problem, as is the resultant potential for undesired as well as desired responses, and the evidence bears this out.”

Bevan et al. (2006)[[20]](#footnote-20) provide some more details about the difficulties in making targets work. This makes clear that improvement on measures does not equate improvement in real performance. This is due to gaming or “hitting the target and missing the point”, defined as a reactive subversion where targeted performance measures improve but performance where targets do not apply decreases.

They focus on the kind of system where targets are transparent (e.g. published in advance) and so is the performance against them. They list a variety of incentives, such as reputational effects, tenure, “earned autonomy” for high performers, budgetary allocations, demonstrating that these need not always be financial incentives at the level of an individual as addressed above by Locke et al (2006b). Indeed, OECD (2011, p. 6)[[21]](#footnote-21) also asserts that “…never answered the question what has to happen if output targets are not achieved… In practice we see very few sanctions, but in theory sanctions are advocated and the threat of sanctions is always in the air. This perverse incentive leads to manipulation of data…and gaming… No campaign to promote civil service values can compensate for that…. Everything we knew about planning in socialist states but now limited to the public sector of a market economy”. This statement seems to go against the earlier advice of Locke et al (2006) that if managers are not be punished as long as some minimum (not hard), standards are respected, there will be no problem. At least in the public service, the lack of “official sanctions” does not mean that there is no perverse incentive related to a target anyway.

A first form of gaming is referred to by Bevan et al (2006) as “ratchet effects” where, if next year’s performance target is based on last years realised performance, there is an incentive not to exceed last year’s target, making it easier to achieve the next one.

Threshold effects refer to the tendency targets have to crowd performance towards the target (reducing performance that is above it and increasing it when below). In other words it incentivises mediocrity. Ordonez et al (2009) referred to this earlier as the “ceiling” effect.

A third effect, output distortion, is linked to the – usually unfulfilled – requirement that for targeting to work, the employed measures should capture total performance not only of the targeted domain but also of other domains. In other words, there is no measurement error of consequence. Otherwise, targets can be achieved by deteriorating significant but unmeasured aspect of performance within or outside the targeted domain, which was recognized earlier in goal setting theory by Locke et al (2006b). It is also related to the issue noted by Ordonez et al (2009) that when people have multiple goals, some of which are measured quantitatively and some of which qualitatively, they will tend to focus on the quantitative. In effect, qualitative measurement next to quantitative is close to only quantitative measurement.

Gaming however does not yet constitute outright cheating. Cheating refers to tampering with the actual measurement and/or reporting of it e.g. as in the case of teachers “correcting” wrong answers on exam sheets to bump up the exam performance of students so that the quality of the school appears to be high.

Wauters (2013, p. 49-52)[[22]](#footnote-22) provides some recent striking examples of gaming and cheating relating to health care in the UK and education in the United States.

It should be understood that the previous points represent only the opportunity for gaming and cheating. However, one could assume that those subjected to the target system are not prone to cheat or game and will resist the opportunity. Bevan et al (2006) provides a typology of actors in the target game.

A first set of actors does not pose a problem: those whose public service ethos is so high that they voluntarily disclose any shortcomings, even if they do not adhere to the target (Saints) and those (honest triers) who do adhere to the targets but do not voluntarily disclose failure while also not gaming or cheating.

A second set of actors does pose a problem: those who adhere to the targets but are prone to game/cheat if offered the opportunity and incentive (reward and punishment) to do so (reactive gamers/cheaters) and those who do not adhere to the target and aim to conceal their operations (rational maniacs).

To assume that targeting works, one must assume the second set of actors forms an inconsequential minority. In addition, one must assume that installing the target system itself does not turn the first set into the second set (referred to as Gresham’s law of gaming). The article calls these assumptions demanding on the basis of the evidence that was found.

Psychologists like Miller et al (2013)[[23]](#footnote-23) support the existence of complex motivational dynamics associated with the interactions of various psychological taxes and subsidies (losses or gains in terms of public and self-respect, esteem, stigma, identity) with material (termed “economic”) ones where the latter can have counter-intuitive effects in terms of the former. E.g. making parents pay a fine for late pick-ups of their children at the day-care centre as this was increasing the total costs of running the centre which was charged to all parents, led to more parents turning up late as they felt they were now no longer free-riding. Another example shows that when money started to be paid for blood-giving, less of the former volunteers showed up as the economic benefit diminished the psychological one. This shows that indeed, it may be very unpredictable how people will respond to an (dis)incentive.

As to cheating on measurement and/or reporting, opportunity is increased if those who do the measuring and reporting are the same actors as those who will be judged on the basis of it. In addition, there is an incentive for supervisors who are supposed to do this judging not to look for evidence of cheating or gaming if this might call reported performance successes into question. The research reports an “audit hole”, a lack of attention to this issue.

Bevan et al (2006) focused on the health care system in England where from 2001, the Department of Health had introduced an annual system of publishing star ratings for public health care organisations, based on a variety of targets, but Dixon et al (2010)[[24]](#footnote-24) looked at the education sector. There, it was observed that in the UK, England maintained school league tables whereas Wales scrapped them as off 2001. The research shows that England did indeed increase in the percentage of pupils gaining five or more GCSEs at grades A to C –which is predominantly what the league tables are based on- relative to Wales between 2001 and 2006. As there are to be presumed few other differences between the two school systems in this period, it could be assumed that the ranking system has a beneficial effect. However, it seems this effect is limited to the actual measure used as the 3-yearly OECD PISA studies show there is no discernible difference between England and Wales on this comprehensive test. Additionally, the study questions whether it is wise for parents to base their choice of schools on the ranking of a school in a league table as this is based on GCSE scores of pupils starting school up to seven years before. Dixon et al (2010) cite research that demonstrates the current ranking does not prove to have sufficient predictive power for future performance.

Of course, gaming and cheating are not actually measurement issues but are practices that are made possible because there are measurement issues. This paper will go deeper into the issues below.

Perrin (1998)[[25]](#footnote-25) draws attention to the fact that in discussions around performance management by measurement, little reference tends to be made concerning previous similar attempts, going under the names of Management by objectives, Program Planning and Budgeting Systems and Management by Results which were widespread already in the 1970s and early 80s, where problems were already present. He notes that even the private sector, where money provides a common measurement unit lacking in the public sector, is moving away from narrow measurement focus on outcomes towards a broader approach with a wide range of measures, even for difficult to measure factors such as a focus on innovation and learning (e.g. incorporated in balanced scorecards). The following measurement problems are stated:

* varying interpretations of the same terms and concepts;
* use of meaningless or irrelevant measures: Perrin (1998, p. 372) states that “There is an inverse relationship between the importance of an indicator and the ease, or even possibility, of its quantification”. This is closely related to Bevan et al (2006) stating earlier that it is not possible to measure all aspects of performance;
* hiding critical sub-group differences by misleading aggregate numbers (e.g. a programme can achieve a 60% success rate without any of the 40% female participants achieving this success);
* not useful for decision-making as –by definition descriptive- measures do not provide any insight into the reasons why a particular measure shows what it shows. Of course, full-blown evaluations are too costly and time consuming to be carried out on a routine basis. Perrin states (1999[[26]](#footnote-26), p 106) “There are no simple solutions to this dilemma”.

These problems with measurement can lead to problems in behaviour.

One problem that may occur is blindness to unintended consequences and rigidity in the face of a changing environment that may penalize responsive managers for addressing new needs and opportunities rather than continuing to make the numbers that may have become irrelevant. This issue was noted already by Locke et all (2006 b) and Ordonez et al (2009) as dysfunctional persistence of goals and strategies.

Finally, goal displacement is stated as a problem, which is similar to the output distortion mentioned earlier by Bevan et al (2006), hence likewise a consequence of the above mentioned measurement problems rather than a measurement problem itself. Typical forms are mentioned to be creaming (focusing on clients that are easier to serve but less needy) and selectively defining the meaning of a measure to include elements not intended originally (e.g. including part time jobs in a measure of “employed” where the intent had been to focus on full time jobs but this was not specified in the measure). Another form of this is put forward as “shifting the burden” where one activities’ success can be at the expense of another (e.g. where “exits” from one programme, seen as a success, are just entries into another one).

Solutions proposed by Perrin (1998) are:

* recognizing almost any measure can be interpreted in various ways and, linked to this:
  + pre-testing measures to see how widely interpretations diverge in the field, and recognizing it usually takes many iterations of use to know if the numbers are accurate and meaningful. Then, keep reviewing and revising as they are put in use. It is best to do this with other stakeholders that are key in interpreting and using the numbers to ensure ownership and relevance;
  + training and orienting those who will be recording and using the information, attempting to provide as clear and unambiguous definitions to them as possible, based on the pre-testing and reviews, while still explaining the possible limitations in terms of how this should be interpreted;
  + the limitations of these suggestions are recognized however. Codebooks are often too difficult for busy field staff to internalize. Involving field staff in pre-testing and reviewing in dispersed settings is not so easy while higher level management tends to hold a greater share of power in deciding what to use anyway. But this higher level may be more influenced by external pressures to report certain measures than by a desire to provide information that helps field staff improve what they do. Also field staff tend to rotate faster than training and orientation can keep up;
* using multiple indicators covering process as well as outcomes and making sure measures are used at the right level, avoiding measures that can hardly be influenced by the organization and its staff. Of course, ensuring that all important performance dimensions are measured was already referred to earlier in this paper by Locke et al (2006) but this triggered the problem that people will find it hard to focus on more than 3-7. In addition, the necessity to have realistic goals was also noted by them;
* not relying on numbers alone, but using a combination of methods, including soft judgment and recognising the numbers are more useful in raising relevant questions, rather than answering them. This can also be linked Bevan et al (2006) who proposed there should be more effort put in face to face scrutiny via random visitations. This can also be seen as a judgment to be integrated into the panel of subject matter experts as proposed earlier in this paper by Locket et al (2006b).

Perrin (1999), responding to criticisms from performance management advocates, adds some extra advice:

* instead of judging whether targets have been met, focus should be on demonstrating if staff have actively questioned and assessed what they are doing. This requires documenting in which areas improvement is deemed possible and why as well as demonstrating that this is acted upon. Perrin reports that this is what leading (private sector oriented) management thinkers such as H. Mintzberg, C. Handy and E. Deming having been saying for some time. This is also consistent with goal setting theory advocating earlier the use of learning objectives rather than performance objectives. Linked to this learning orientation, it is recommended to proceed on the basis of asking questions first, then thinking about the data needed to answer them;
* distinguish between “bad” and “dirty” data: “dirty” data such as interviews, surveys with representative but very small samples and a variety of qualitative data collection methods where not everything is probed and analysed in detail are to be contrasted with “bad data” that is irrelevant, misleading or untrustworthy. Perrin (1999, p. 117) states: “ I am a strong supporter of “dirty data””. Bevan et al (2006) also proposed there should be more attention to auditing the data on which assessment of performance is based, when this is generated by the entity that is being assessed. Currently, audit resources are concentrated on fiscal probity and value for money, but audit of the data is called fragmentary and episodic. This complements the idea of reinforcing organizational control systems by Locke et al (2006). It should be clear these are measures that aim at preventing “bad data” but that they should not prevent the use of “dirty data”;
* in terms of using multiple methods, Perrin (1999, p. 118) provides the example of “using strategic stories as an alternative to the traditional business plan and quantitative metrics which leave critical relationships and assumptions unstated.”

It should be clear that Perrin (1998/9) tends towards not using measures for accountability purposes at all. If measures really have to be used in the latter sense, it may make sense to follow the recommendation of Bevan et al. (2006) to introduce more uncertainty about what measures are used to assess performance by making transparent what they are in retrospect but not in real time. This complements the suggestion by Locke et al (2006) to at least use a continuous linear bonus system if monetary incentives are really to be used.

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**To conclude this part of the discussion, it should be considered what are the implications for the Flemish ESF Agency of adherence to the “measurable” part in the SMART acronym.**

**Pre-testing has not been on the agenda when discussing the measures used both at EU level as well as by the Flemish government to follow-up on the ESF Agency. Nor have measures actually been revised. The measures are predominantly numerical and little use is made of soft judgment in combination with other methods of data collection (possibly entailing “dirty” but not “bad data”). Although the ESF Agency is required to provide some insight into what the numbers mean, this turns out to be very difficult in practice as, as predicted, they tend to raise rather than answer questions.**

**It should also not be forgotten that the previous discussion on goal setting theory had already asserted that requiring hard, specific, quantitative targets, applies only at the level of individuals and not of an organization. This positioning of targets is reaffirmed in the measurement discussion where the advice was to use (not only quantitative) measures to provide information that helps field staff improve what they do rather than serve external demands of accountability at higher levels. Those latter demands would be better met by demonstrating if staff have actively questioned and assessed what they are doing.**

**The Agency produces its own performance data. Whereas the EC mandates systems audits to try to ensure that data relating to money flows are sufficiently accurate, no such effort is put into performance data, neither by the EC at the level of the programme (output and outcome indicators) nor at the level of the Agency in terms of its “contract” with the Flemish government. Possible gaming and cheating regarding performance data are not even recognized as an issue at all, despite the fact that all measures are transparent ex ante and hence Agency staff are aware of what is considered important and how this will be measured. Of course, no financial incentives exist at the level of individual staff members but as stated earlier by Bevan et al (2006) and OECD (2011), there are other factors than money that provide incentives to game and cheat.**

Goals may motivate, but the type of motivation also matters

The third issue that had to be addressed, based on the Raia (1965) article was that commitment, an important factor to ensure motivation to achieve a goal, as put forward by Locke et al (2006b) earlier, may be stimulated by something other than financial gain, with competition and personal pride being mentioned as alternatives.

A stream of research relevant to this issue deals with the difference between instrinsic and extrinsic motivation and is referred to by Ryan (2009)[[27]](#footnote-27) as “self-determination theory” (SDT). This theory posits that people are active organisms with inherent tendencies toward psychological growth and development. This article defines the phenomenon of “intrinsic motivation” as “the natural tendency manifest from birth to seek out challenges, novelty and opportunities to learn”. Ryan et al (2000)[[28]](#footnote-28) refer to findings of developmental psychology that confirms that children are active, inquisitive, curious even without specific rewards.

The theory points out that these natural tendencies do require support from one’s social environment to operate robustly. This support is to be directed at three basic psychological needs, namely the need for autonomy, for relatedness and for competence. Baard et al (2004)[[29]](#footnote-29) define needs as innate, rather than learned and clarify that if satisfaction showed empirically to be related to a need, it actually is one, whereas if this is not the case, we should refer to it as a desire. Ryan et al (2000) state that research showed that people whose motivation is self-authored/endorsed have more interest, excitement, confidence, which in turn is manifest as enhanced performance, persistence, creativity, vitality, self-esteem and general well-being as opposed to people whose motivation is externally controlled. This is so even when people have the same level of self-efficacy for a task.

Ryan (2009) states that SDT consists of five mini-theories. Due to the length of this section, it is split into several sub-sections.

**Cognitive evaluation theory: intrinsic motivation is linked to autonomy, competence and relatedness needs**

The first is “cognitive evaluation theory (CET)” that stresses the importance of autonomy and competence to intrinsic motivation and that argues that events that are perceived to detract from these will diminish it. It addresses how factors such as rewards, deadlines, feed-back and pressure affects feelings of autonomy and competence. Ryan et al (2000, p. 70) state: “feelings of competence will not enhance intrinsic motivation unless accompanied by a sense of autonomy…an internal perceived locus of causality… This requires either immediate contextual supports… or abiding inner resources…result of prior developmental supports”. Deci et al (1999) mention factors such as surveillance and threats as negatively related to intrinsic motivation. Providing choice, on the other hand, would increase intrinsic motivation. Ryan et al (2000) add optimal challenges, effectance promoting feed-back (as opposed to demeaning evaluations), acknowledgment of feelings and opportunities for self-direction as facilitating intrinsic motivation as they enhance the feeling of autonomy. Directives, imposed goals etc. are tending to decrease intrinsic motivation when they conduce towards an externally perceived locus of causality. Vansteenkiste et al (2006)[[30]](#footnote-30) add testing and controlling langue as examples of the latter.

Deci et al (2001)[[31]](#footnote-31) providing a new, improved and enhanced meta-analysis based on 128 experiments, also mention evaluations as well as the general climate of a setting as more examples of external factors that can affect intrinsic motivation. This depends on whether they stress an informational aspect, conveying self-determined competence (leading to an internally perceived locus of causality), versus a controlling aspect that does the opposite.

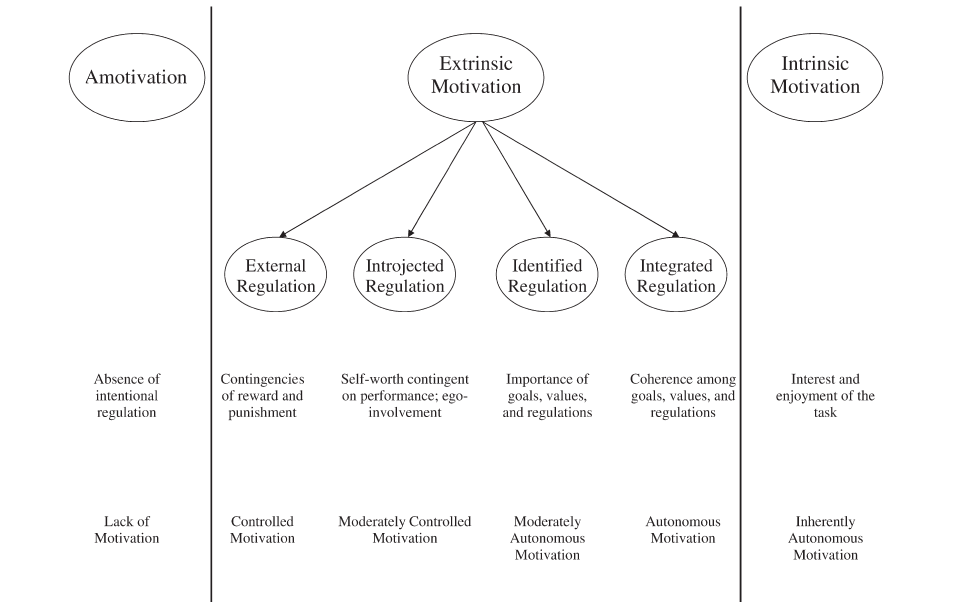
Ryan et al (2000) also expand on the third need, for relatedness. They state that even while people can be intrinsically motivated in isolation, this motivation tends to flourish more in context that are characterized by a sense of security and relatedness not necessarily in the sense of proximal relational support but also as a secure relational base.

**Internalising extrinsic motives: controlling versus autonomy supporting environments**

The second mini-theory (Ryan, 2009), “organismic integration theory (OIT)”, addresses the process of internalization of extrinsic motives. “Internalization” is defined as the propensity of individuals to take on and attempt to integrate the social practices and values that surround them. The more autonomous a person’s motivation is, the greater their persistence, performance and well-being at an activity or within a domain.

Ryan et al (2000) provide more details on OIT. It starts from the idea that different motivations reflect different degrees to which value and regulation of the requested behavior have been internalized (taking it in) and integrated (further transforming it into their own). Intrinsic motivated actions then refer to doing an action because it is inherently satisfying (the three basic needs), versus extrinsically motivated actions being actions we do because we want to attain some separable outcome. However, extrinsic motivation can vary greatly in its relative autonomy. Figure 1 shows a continuum of motivation relative to the degree of self-determination

Figure 1: types of motivation



Source: Gagné et al (2005, p. 336)

Ryan et al (2000) expand on this continuum. Amotivation is the state of lacking the intention to act, or acting without intent (going through the motions) due to not valuing, feeling incompetent or not expecting to yield a desired outcome relating to a task. External regulation means doing a task only to satisfy an external demand, typically with a feeling of being controlled or alienated. Introjected regulation refers to acts performed to avoid guilt or anxiety or to attain ego enhancements such as pride and maintaining feelings of self-worth. Although the latter is internally driven, the perceived locus of causality is external. It is noted that external and introjected regulation have in some research been taken together as a controlled motivation composite, reflecting the experience of being pressured or coerced.

Regulation through identification reflects a conscious valuing of a behavioural goal or regulation, such that the action is accepted as personally important. Integrated regulation occurs when regulations have been evaluated and brought into congruence with one’s other values. This leads to a more internally perceived locus of causality. There is however still a separate outcome that is the trigger for the action, not the enjoyment of the action itself. The latter two types of motivation have been integrated in some research as an autonomous motivation composite, reflecting the experience of volition and choice. Greater integration is demonstrated by research to be linked with more behavioural effectiveness, volitional persistence, enhanced subjective well-being and better assimilation into a social group.

Vansteenkiste et al (2006) provide three respective student related examples. Students who study primarily because they know their parents will reward them, students who study before going out as they know they would otherwise feel guilty, students who study a course they do not see as immediately satisfying (e.g. statistics) because he or she has accepted the importance of this for their self-selected and intrinsically enjoyable activity of empirical psychology.

Ryan et al (2000) provides some suggestions how to facilitate internalisation.

First, for tasks that are not interesting, the primary reason people will do them anyway is because they are prompted, modeled or valued by others to whom the (want to) feel attached or related. This of course reflects the need for relatedness. Second, support for competence will facilitate internalization, by increasing self-efficacy. Third, the degree of autonomy conferred by the context is key (experiencing choice).

This leads to more insight into how different kinds of motivation are stimulated by their context:

* external regulation by salient rewards and threats, combined with people that feel competent enough to comply;
* introjected *regulation* is facilitated if a relevant reference group endorses that task and the person feels competent and related;
* identified/integrated regulation: in both cases a sense of choice, volition, freedom from excessive external pressure is required to allow people to grasp the meaning of a regulation and synthesise this meaning with respect to their other goals and values. It still driven by the desire to relate to others.

Vansteenkiste et al (2006) provide insight, in an educational setting, of what an autonomy supportive context looks like: it is one where instructors empathize with a learner’s perspective, allow opportunities for self-initiation and choice, provide a meaningful rationale if choice is restrained thus enhancing relatedness and autonomy, refrain from using pressures and contingencies to motivate and provide positive feed-back. It should be note that Locke et al (2006b) already emphasized the importance of providing a purpose or rationale for assigned goals. Being purposeful brings pleasure according to Latham et al (2006). They did not explain why it brings pleasure however. Now we can understand that it is linked to basic needs.

Externally controlling environments however made use of overtly coercive strategies, e.g. salient reward contingencies (see the next sub-section for more), deadlines, controlling language (have to, should, ought). However, guilt inducing strategies, naming and shaming, and the use of conditional regard lead to students placing themselves under a form of internal control.

Intrinsic and well internalized extrinsic motivations, facilitated by autonomy supportive contexts, are expected to promote adaptive learning better and this is supported by a variety of research.

**In come the rewards: are they always bad?**

Deci et al (1999b)[[32]](#footnote-32) adequately respond to the criticisms relating to a meta-analysis they had conducted to substantiate the undermining effect of intrinsic motivation by rewards. This is also quite interesting as it helps clarify what this theory really says as well as what it does not say, especially relating to the use of rewards.

It emphasises that rewards (even expected tangible ones) can have an informational aspect that can enhance intrinsic motivation by enhancing perceived competence. Therefore, if external events such as rewards are administered with an informational rather than a control style (where people feel pressured to think, feel, or behave in particular ways), and are hence perceived as such, the undermining effect on intrinsic motivation will be respectively less or more.

Deci et al (2001) state that it would be erroneous to reason that completion rewards (for ending a task) are perceived as more controlling that engagement rewards (for starting it) and that performance rewards (for doing it well e.g. up to a standard or surpassing a criterion) would be even more so than completion rewards, hence having the most detrimental effect on instrinsic motivation. Indeed, this would mean ignoring that that these rewards also convey competence – constituting the informational aspect. Whether the informational aspect wins out depends on how well the reward actually conveys excellence and whether the interpersonal context is not perceived as controlling or demanding. The research shows that in fact, completion and engagement contingent rewards equally undermine intrinsic motivation, supporting the existence of the counteracting effects of the informational and controlling aspects.

Regarding performance rewards, Deci et al (2001) confirm Deci et al (1999) in that undermining effects vary. When a group of subjects that received no feed-back at all is compared with a group where all subjects receive maximum possible rewards, then there is a significant undermining effect. The same applies if in both groups positive feed-back is also provided. However, if both groups were rather provided with negative feedback, the rewards did not matter for intrinsic motivation. Finally, if a group that receives no feedback is compared with a group where those who perform best get proportionally larger rewards to their performance, communicating most clearly that reward is a function of performance to this group, then the undermining effect is the largest found across all the comparisons. The undermining effect remains valid regardless of the timing of measurement (a few days versus at least a week after the reward was terminated). Actually, undermining was stronger in the long run.

However, Gagné et al (2005)[[33]](#footnote-33) point to research that shows that when rewards were contingent on high quality performance and the interpersonal context was supportive rather than pressuring, tangible rewards enhanced intrinsic motivation relative to a comparison condition with no rewards AND, importantly, no feedback. Also, they state the rewards must be perceived as equitable in order not to have negative effects. However, these performance-contingent rewards did lead to lower intrinsic motivation than a control group that got positive feedback comparable to that conveyed by the rewards. So positive feed-back is to be preferred to performance rewards, even in autonomy supportive environments.

Deci et al (2001) note that tangible rewards, as opposed to verbal rewards (positive feed-back) will tend to be perceived as controlling. However, while positive feed-back tends to have a positive effect on intrinsic motivation, the research shows verbal rewards can also have a negative effect if the interpersonal context is experienced as controlling. In addition, Gagné et al (2005) point out research that shows that negative feedback which decreased perceived competence was found to undermine both intrinsic and extrinsic motivation, leaving people amotivated.

But Deci et al (1999) also note that when rewards were given independent of a specific task (as might be the case with a salary), this did not affect intrinsic motivation. Also unexpected, non-task contingent rewards actually positively affect perceived competence and hence intrinsic motivation. Deci et al (2001) confirmed this finding and note that the unexpected nature of positive feed-back probably accounts for the fact that it usually enhances intrinsic motivation. Also, Deci et al (1999) note that if moderator variables such as salience of the reward is in play the effect of the reward may not be detrimental, notably if it is not salient.

The only new finding derived from the criticism that Deci et al (1999) acknowledged is that people who are told that they will be evaluated on the basis of outperforming their peers will be more intrinsically motivated if they are told they will get a reward for doing so. But it should not be forgotten that this kind of competitive setting has negative effects on intrinsic motivation as discussed earlier. Rewards therefore in this case only alleviate a detrimental scheme.

Murayala (2010)[[34]](#footnote-34) show evidence for a neural basis of the undermining effect of monetary rewards and show these effects persist by using a functional MRI scan.

Deci et al (1999) also use the findings of their meta-analysis to substantiate OIT stating that offering rewards for an uninteresting task may help to convey that this previously perceived dull and boring activity has value, which actually facilitates internalization and counterbalances the controlling aspects that would hinder such internalization. Deci et al (2011, p. 14) confirms this and states “it is clear that rewards do not undermine people’s intrinsic motivation for dull tasks because there is little or no intrinsic motivation to be undermined. But neither do rewards enhance intrinsic motivation for such tasks.” In this case, intrinsic motivation being irrelevant, it would be acceptable to go for extrinsic motivation to achieve better performance as postulated by goal setting theory earlier. However, promoting self-regulation for such tasks should perhaps better be addressed with internalization, where people’s understanding of the importance of the task to themselves is facilitated.

**What does the goal itself have to say about it?**

Another mini-theory, “goal contents theory” (Ryan, 2009), supports that extrinsic goals such as materialistic goals, fame or image do not tend to enhance the satisfaction of the three basic needs, and thus do not foster well-being. This is to be contrasted with goals such as intimate relations, personal growth, or contributing to one’s community. Vansteenkiste et al (2006) add health and affiliation versus physical appearance and financial success. Extrinsic goals have a ‘having’ orientation concerned with external manifestations of worth, while intrinsic ones have a natural growth orientation concerned with basic needs satisfaction. When people are focused on extrinsic goals they tend to score worse on a whole range of indicators (e.g. more prejudiced, less cooperative, less self-esteem, less satisfaction, more depression and anxiety, etc.). To avoid confusion, they point out that goal content is different from goal motivation in that the latter refers to ‘why’ people are engaging in an action.

Mossholder (1980)[[35]](#footnote-35) hypothesized that externally imposed specific (quantitative) difficult goals represent a similar process to external incentives in that these goals lead to undertaking the task as a means to attain an end, valuing it largely for its instrumentality in reaching the goals rather than for intrinsically satisfying qualities. Performance pressures and constraints sometimes found to accompany externally imposed goal setting are evidenced to reinforce the perception that goals are to be established as a means of control.

The paradox was however noted that for uninteresting tasks, goal setting actually makes these tasks more interesting. The findings supported indeed that assigning specific difficult goals to interesting tasks leads to reduced task interest, persistence (both of which are put forward as measures of intrinsic motivation) and satisfaction, while assigning them to boring tasks increased these outcomes.

Deci et al (1999) refer to a meta-analysis that showed the regular use of “performance” goals (focus on demonstrating competence hence with an external manifestation of worth) rather than “mastery” goals (focus on acquiring competence, a growth orientation) leads to less free-choice task persistence (a measure for intrinsic motivation) especially when feed-back was given that explicitly confirmed successfully matching the standard.

Deci et al (1999) also go into some detail regarding the effects of on an explicit, exceeding-others standard e.g. beat 80% of the competition. Such a system would mean the beaten 80% would get negative feed-back that they are not so competent, negatively affecting the need to feel competent. Furthermore, explicit competition (even without offering rewards) has also been demonstrated to undermine intrinsic motivation of those engaging in it, in part due to a decrement in perceived autonomy caused by the competition.

Vansteenkiste et al (2006) report on various studies that aimed to test further goal contents theory. They report relating to a reading activity that intrinsic goal framing indeed has an effect on self-reported and observed deep-level processing, test performance and free choice persistence. The results were replicated in other studies using different goals, learning materials and even relating to physical exercises rather than reading materials. However, a differential effect was also found for rote (literal and factual processing of material) relative to conceptual learning. Extrinsic goal framing always undermined the latter while it either had no effect or enhanced rote learning. Finally, it was also evidenced that intrinsic goal content framing and an autonomy supporting environment both have an independent effect on autonomous motivation, deep learning, achievement and persistence and that it affected learning outcomes both indirectly via autonomous motivation as well as directly.

This is consistent with goal setting theory stating earlier that for complex tasks that require new competences, setting hard, specific performance rather than learning goals actually reduces performance.

**Addressing the critics**

Latham (2007, p. 107 and p. 157)[[36]](#footnote-36) offer a few criticisms towards SDT. He claims that intrinsic motivation, as measured by time spent on a task during a free period is not relevant to the workplace as work always includes almost always assigned deadlines, imposed standards and pay. Also, he states that studies supporting SDT always omit to measure the mediating variables namely the feelings of competence and self-determination, relating to the criticism that SDT does not distinguish between liking an activity for its own sake or liking it because it makes on feel competent.

The idea that in a work environment, intrinsic motivation is an irrelevant concept as de facto , it is a more controlling context, ignores the concepts offered by OIT. Ryan et al (2000) indeed stated that “much of what people do is not, strictly speaking, intrinsically motivated, …. curtailed by social pressures to do activities that are not interesting…”. The process of internalization, espoused above, was developed to deal with this. Also, it should be understood that Deci et al (2001) in their meta-analysis use not only free choice behavior (101 times) but also self-reported interest (89 times) as the measure for intrinsic motivation and found no difference whether one or the other measure was used.

In addition, Baard et al (2004) is an example of applying the theories in a work environment –a major US investment bank - using a variety of questionnaires that did assess all mediating variables. In addition, the worker’s autonomy orientations as well the autonomy support from managers were assessed. The outcome variables were performance and adjustment (anxiety, somatisation). It presented the following results: managerial autonomy support positively affects experienced satisfaction of each of the three basic needs while a worker’s autonomous orientation positively affected only two. All three needs predict adjustment and the relatedness need also predicts performance. The latter is stated to shed some light on inconsistent results concerning the link between job satisfaction and performance from previous research. Perhaps only when job satisfaction is measured related to relatedness needs, rather than other basic needs or no needs at all, would a relation with performance be found.

Concerning performance, Gagné et al (2005, p. 352) confirm that “…suggests that autonomous versus controlled motivations and the conditions that prompt these motivations may moderate the link between satisfaction and performance on the job. In other words, when job conditions prompt autonomous motivation for work there will be a strong positive relation between performance and satisfaction, but when they prompt controlled motivation this relation will be absent.”

Gagné et al (2005, p. 346) confidently state that “Taken together, studies in organizations have provided support for the propositions that autonomy supportive (rather than controlling) work environments and managerial methods promote basic need satisfaction, intrinsic motivation, and full internalization of extrinsic motivation, and that these in turn lead to persistence, effective performance, job satisfaction, positive work attitudes, organizational commitment, and psychological well-being” and that “...examining the relation of types of motivation to effective performance. Research has indicated that understanding this relation requires differentiating performance outcomes in terms of whether the task is relatively simple, involving the tedious application of an algorithm, or is more difficult, involving flexibility, creativity, and heuristic problem solving... Laboratory experiments as well as field studies in several domains have shown that autonomous motivation is associated with more effective performance on relatively complex tasks, whereas there is either no difference or a short-term advantage for controlled motivation when mundane tasks are involved.”

Yet, Gagné et al (2005) also concede that relatively fewer studies have tested the theory within organizational settings and that further research in these settings is to be conducted.

One of the more recent outputs of this is for example Kovjanic (2012, p. 33)[[37]](#footnote-37), who found “a strong relationship between transformational leadership and fulfillment of all three basic needs. More importantly, we found that need satisfaction played the expected mediating role in linking transformational leadership and employee outcomes.” Employee outcomes were job satisfaction, occupational self-efficacy and commitment to the leader and the results remained the same when measured again five weeks later.

Finally, the views of Gagné et al (2005) in terms of its relation with goal setting theory are useful:

* SDT proposes that autonomous motivation (comprising identified and integrated extrinsic regulation) and intrinsic goals are better predictors of effective performance on heuristic, complex tasks whereas the two types of motivation do not differ in predicting effective algorithmic, mundane task performance, particularly over the long term. Goal setting theory does not recognize this;
* there is a noteworthy point of convergence in that SDT puts forwards that a ‘meaningful rationale’ is one of the important factors that facilitates integrated internalization, and that goal setting theory confirms it facilitates convincing people of the importance of a goal and hence increases commitment which is a key condition to ensure the relation between goal setting and performance.

There are two more mini-theories, that are less relevant to this paper and we therefore conclude the discussion of SDT with only a brief explanation. The “causality orientations theory” (Ryan 2009), describes how individual differences in people orient them to different aspects of their environment in regulating their behavior. Autonomy orientation orients people to what interest them while control orientation orients them to social controls and reward contingencies. Finally, impersonal orientation leads persons to focus on their lack of personal control or competence. The orientations can be activated in people by certain stimuli. A final mini-theory is “basic psychological needs theory” (Ryan, 2009) which connects the three basic needs independently and directly with well-being.

**Implications of SDT for the Agency?**

We can now summarise the discussion relating to SDT relative to the issue as identified by Raia (1965). The theory and research clearly support that motivation may be linked to something other than financial gain, ranging from competition to personal pride. In fact, it puts forward that these particular incentives are actually extrinsic control rather than autonomy oriented motivators (financial gain linked to external regulation while beating the competition and personal pride are linked to introjected regulation) and hence will be less effective, especially for complex tasks

The discussion may also offer some insight into the occurrence of cheating and gaming, as debated previously regarding measurement. These may well be signs of extrinsically motivated behaviours, with people willing to do whatever it takes, triggered by controlling mechanisms such as rewards, surveillance, threats, guilt inducement, etc. However, it may also be that people are trying to protect their deep intrinsic motivation, safe-guarding what they feel is valuable, by token compliance with what is requested.

**Finally, what are the implications for the ESF Agency of this discussion regarding SDT?**

**SDT further reinforces the already established view that target setting should not be applied at the level of an entire organisation. This will inevitably be perceived as a push for control coming from outside the Agency because at such a high level, the information cannot be conceivably put to any proper use (as already evidenced also by the debate on measurement) for improvement, hence reducing at the level of staff the feeling of self-determination and any autonomous or intrinsic motivation that may already exist, especially towards more complex tasks.**

**Rather, building an autonomy supportive environment is of crucial importance. Giving positive feedback is a key part of this this provides information on what has worked, reinforcing our need for mastery.**

**Extrinsic goals, e.g. performance oriented ones, are in any case generally to be avoided, in favour of intrinsic ones, especially for more complex, interesting tasks where otherwise intrinsic motivation can be destroyed (and as we already saw under goal setting theory, also performance). However, for more routine tasks, staff can set specific, hard performance objectives, as this does help internalize them.**

**For more routine tasks, it is also acceptable to offer tangible rewards, as there is no intrinsic motivation to be destroyed anyway and short term task performance is affected positively by it. However, the rewards will not help internalize the task. For this, it is better to provide a broader purpose, reinforcing our need for relatedness, instead of a tangible reward.**

**From quantitative measures to…”a picture says more than a thousand words” (or numbers)**

The fourth issue to address, as indicated by Raia (1965) was that what may matter may be verifiability (associated with a deadline) of a goal, not quantitative measurement.

A stream of research relevant to this issue pertains to mental simulation. Taylor et al (1998, p. 429-30) define mental simulation as “the process by which we envision the future and then regulate our behaviour and emotions so as to bring it about…the imitative representation of some event or series of events. It may involve… hypothetical scenarios… fantasies…”

They refer to research that has demonstrated that regulation of emotional states and maintenance of problem solving activities are key to moving from a current series of potentially stressful situation(s) to a new situation. Mental simulation can play a part in this when they involve imagining plans of action. These imagined plans are unlikely to rely on improbable or fantastic steps. This fact that mental simulations obey the constraints of reality is probably why people who engaged in it are more likely to believe that the events will actually occur. In any case, the imagination triggers problem solving activities. Indeed, the simulations provide information about the imagined events. It may lead to seeing opportunities in advance that might otherwise be missed. It also tends to evoke emotional states and in this way provides a way to prepare for this emotions. Examples where visualization is known to be effective is with athletes (e.g. imagining the details of executing a dive) and with relapse prevention (e.g. imagining being in situations that offer temptations). Pham et al (1999)[[38]](#footnote-38) put also forward that it creates a sense of readiness for action.

However, Taylor et al (1998) puts forward that not all form of mental simulation may be useful to help regulate behavior. A distinction is made between outcome simulation and process simulation. In the first case, one envisions the outcome e.g. a student envisioning him/herself as a successful psychologist. In the second case, one rehearses all that is necessary to actually achieve that outcome e.g. applying to university, conducting research, attending conferences, networking etc. The research shows that outcome simulation does make people feel good, but that this is at the expense of effective planning and problem solving.

The research conducted by them Pham et al (1999) confirm Taylor et al (1998) in that process simulation led to better performance than outcome simulation. This resulted largely from its effect on planning and the regulation of anxiety. By better planning, students strove for a higher grade which positively affected performance. It also showed they spent more time on studying. It showed outcome simulation did not have a positive effect and in fact, could prove detrimental as students lowered their expectations regarding the grade they were striving for. An explanation of this might be that outcome simulation leads to an anticipatory consummation of success and prevents a person from appreciating the efforts required for goal achievement. The latter hypothesis is further evidenced by Kappes et al (2011)[[39]](#footnote-39) who demonstrated that positive fantasies decreased energy (excitement, enthusiasm) more than questioning, negative or neutral fantasies. They also put forward that, in cases where needs cannot be satisfied in actuality, satisfying them in fantasy may be adaptive in terms of decreasing arousal so that one can focus on immediate tasks leading to feelings of relaxation and contentment. When relaxation is the aim, positive fantasies can be useful.

Pham et al (1999) also set out to test possible other mechanisms that could account for the effects of mental simulation on goal-directed action. First, by virtue of yielding information about how to achieve the goal or by making the goal seem proximal, self-efficacy can be enhanced. This can then trigger enhanced striving and superior performance. Second, it may enhance the subjective likelihood and /or desirability of a goal. Third, by making the goals or steps to reach it salient, it may influence the intention to initiate action. Finally, they hypothesized that outcome simulation may lead people to identify actions at a higher level whereas process simulation leads them to do so at a lower level. Low level action is thought to facilitate performance on complex and difficult tasks. None of these hypotheses were found to be supported by the executed research.

Pham et al (1999, p. 259) therefore conclude that “the maximal advantage of mental simulation in bringing about effective action may be achieved by articulating a goal state clearly but then focusing on the process for reaching it rather than keeping the goal state clearly in mind throughout one’s effort ”.

A study by Thompson et al (2009)[[40]](#footnote-40) provides some warnings however about process oriented mental simulation. They found that process oriented thinking could make it more difficult for consumers to make a choice and that, even after making a choice, they were less committed to it. The reason for this is that process oriented thinking may force people to have to consider trade-offs between desirability (what to get) and feasibility (how to get it). This trade-off is not present with outcome oriented thinking, which facilitates decision-making. However, if a decision only entailed making a trade-off between means, with the end being fixed beforehand, or alternatively, if the means were fixed and only ends had to be decided on, then no problems occurred. This means that the conclusion offered previously by Pham et al (1999) still stands as it advises to fix the goal state (the end) first and only then to engage in process oriented thinking regarding decisions how to achieve the goal. In fact, Thompson et al (2009) showed that decision-making regarding means was actually facilitated by process oriented thinking, when the ends were already fixed. They also noted that the links between process-orientation and performance as noted by Pham et al (1999) may depend on the nature of the task. A relatively simple task may benefit less from mental simulation than a complex one.

Shaw et al (1998)[[41]](#footnote-41) provides an elaborate example from company 3M of using story telling to aid in strategic planning. They identify in this example the key components of a story: first, the stage must be set (the current situation), second, dramatic conflict must be related (challenges, critical issues), finally, resolutions is required (how obstacles are overcome and lead to the desired outcome). Clearly, this matches closely what has been put forward in terms of mental simulation.

**The conclusion of this section is straightforward. Especially for complex tasks, engaging in mental simulation, focused on the process to achieve an already fixed outcome, is a worthwhile endeavor. In fact, it provides an alternative to setting quantitative targets as put forward by goal setting theory while still taking advantage of the same mechanisms reported earlier to make these targets effective, namely:**

* **it directs effort and attention;**
* **it is evidenced to energize;**
* **it is evidenced to affect action by discovery and / or use of task relevant knowledge and strategies;**
* **it is evidenced to affect effort.**

**A key question, not answered yet by the research, is whether it would be more beneficial to describe the outcome also via mental simulation or via a quantitative measure. Part of answering this would entail to verify which kind of outcome would enable process oriented mental simulation better. It could be hypothesized that a more concrete description as derived from mental simulation provides a better starting point for ensuing process oriented mental simulation.**

**In any case, given the problems with measurement as discussed earlier, mental simulation, both of outcomes (first) and process (next), may provide a way out for harder to quantify objectives, in line with the suggestions made by Perrin (1998 and 1999) to make use of a greater variety of methods, such as performance stories and to measure process as well as outcome. Indeed, a picture (or mental simulation) tells more than a thousand words, but writing it down in the form of a story may helps us remember better what we imagined.**

**In terms of the functioning of the ESF Agency, the implications are that this practice, if introduced, may even detract attention of the controlling aspects of the current target regime. It may prove to be a vital step in moving away from the latter while still maintaining the benefits of verifiability. Indeed, it should be remembered that mental simulation was reported to be good at integrating real constraints, one of which is a deadline.**

**How complex can it get? Of agents, probes, attractors, boundaries, and power.**

To conclude this article, it is interesting to note the links between the discussion about the four main issues in this paper (challenging and realistic goals; gaming and cheating; intrinsic versus extrinsic motivation; verifiability versus measurement) and what is referred to as “complexity theory”.

Mowles (2011)[[42]](#footnote-42) critiques the ruling ideas about what constitutes good management from the point of view of the complexity sciences. He draws on the work of complex systems modellers such as Peter Allen and Peter Hëdstrom as well as Nobel prize winning chemist Ilya Prigogine, next to a variety of other authors from other disciplines including sociology.

According to Mowles (2011), Peter Allen distinguishes four stages of complexification. The first one is the equilibrium model which assumes that microscopic events occur at an average rate, that individuals are of a given type and have a normal distribution around an average type and that the system moves towards equilibrium. Non-linear dynamical models represent stage 2 as they drop the assumption of moving to an equilibrium. Stage three is constituted by self-organising systems that only retain the assumption of average individuals. Stage four are the evolutionary complex systems. Here, radically unpredictable patterning can arise which is constrained by the parameters set for the system. Despite the fact that the agents are programmed and hence behave deterministically, the patterns that arise untraceable back to the programmed algorithms.

To Allen the fourth stage is useful for telling us something about the idea of “optimal strategy”. Indeed, he suggests no strategy is optimal for long as mathematical stage four models show different diverse players adapting to each other and to the environment on which they act, in a series of particular moments in an unending imperfect learning process. A strategy that looks good at a particular iteration does not look so good anymore a few iterations further as everyone is adapting to what everyone else is doing. Innovation and change occur because of diverse, non-average individuals with peculiar initiatives that lead to exploration of an area where positive-feedback outweighs negative. Value (it was good or bad) is assigned only afterwards.

Like with Allen’s models, Hëdstrom’s interacting agents are programmed with a varied combination of desires, beliefs and opportunities which affect their interactions with local others. He developed a model to help look at patters of unemployment in Stockholm. The simulation was run a thousand times. It led to the conclusion that while in one situation the actions of X might lead to Y, in another context where the power relations between X and the network of agents they are related to are slightly different, an entirely different outcome is possible even if the same actions are pursued. Differences in starting positions or contexts, differences in relationships between agents, connectedness or otherwise of actors in their context all create a situation where a large effort can produce a small results and the reverse. Hëdstrom is reported to state that large scale social phenomena that are observed may simply be due to an uncommon combination of common events and circumstances. Social patterning arises in unpredictable ways even if we can identify many of the important factors. And then there are still other factors we cannot even identify. We can make sense of it all only retrospectively.

Mowles (2011) then discussed the work of Prigogine relating to chemical reactions. Prigogine demonstrated that approximating the interactions of ensembles of particles requires a very different statistical method, based on probability, than plotting individual particle trajectories or extrapolating from individual particles to the population as a whole. This is the preconditions for natural phenomena such as evolution and the unpredictability of the weather. The future is under perpetual construction arising from disruptions, asymmetries and bifurcations that arise from interactions within the population. This population does not evolve towards equilibrium but develops through mutually adaptive behavior of agents in the population who sometimes behave in a deviant manner.

Mowles (2011) concludes that systems of the kind discussed above demonstrate the ability to be both stable and unstable at the same time. Interacting agents are forming a global pattern, just as that pattern forms them. The rules of interaction between these agents are evolving at the same time as the global pattern they produce is forming, making it impossible to predict exactly how the system will evolve. Mowles (2011) refers to Ralph Stacey, another complexity theorist, who asserted that change results of many interactions of people acting locally with others, no matter how well-conceived, planned and executed any change project may be. What actually transpires will therefore be unpredictable, as a combination of the expected, unexpected and unwanted. There is no doubt that leaders and managers can have a profound influence on what goes on in organisations because of the power they wield, but it is not sufficient to ensure predictability. And one should not forget that humans are not programmable agents.

Applying these insights Mowles (2011) has a closer look at what is referred to as “vision”, “strategy” and “targets”.

Regarding vision, he cites several leadership scholars who have taken the term to refer to something typically specific enough to give guidance but vague enough to encourage initiative and remain relevant under a variety of conditions. Indeed, he states that distance and abstraction are the most basic conditions for the functioning of vision. He does see the process of visioning as inviting people to imagine their efforts as contributing to a greater, truer, noble undertaking, an enlarged sense of purpose. It is an appeal to the bond of relationships between people, uniting them, and their ability to collectively bring about a better future. This resonates with earlier idea of SDT that a meaningful rationale is required for internalisation. For Mowles, the collective process of making promises to each other also feels like an island of certainty in a sea of unpredictability. In this sense, it cover both the relatedness and competency basic needs as present in SDT. It is also an act of freedom according to Mowles. Here the SDT autonomy need is satisfied. This leads to a sense of excitement according to Mowles. He states on page 130: “Clearly there is something to the idea that people look for some kind of emotional fulfillment in their work above and beyond turning up each day to simply earn money.” Yet the excitement is prone to disappearing once people go about their business again.

However, he also puts forward that no one, no matter how powerful, can impose meaning on others. Instead, meaning emerges from the continuous iteration of gesture and response between engaged people. It should be clear that visions may be necessary utopian generalisations to sustain people in the work they do, but as generalisations, they do not adequately inform how to go on together in particular circumstances. The moment an idealization is taken and plans are made around it and implemented without making constant reference to the objects of our plans in their particular contexts, in the process of daily work, the more likely people will experience becoming an adjunct to the plan rather than the cause. Visions cannot map out all aspects of knowing how to take the next steps. Rather, people have to continuously look for ways to discuss, argue over, rework and functionalise these idealisations. If someone refuses to let this happen and is professing to hold an unique insight that others should follow, then there is potential for bullying.

When discussing the discourse on strategizing, Mowles (2011) asserts that the actual form this is taking nowadays is not so relevant but rather a matter of adopting one tradition or another. More important is the power struggle, the intensely political process, that takes place in groups, mainly over resource distribution and recognition. Claims for greater participation in this view merely signify attempts to tilt power away from the CEO or other powerful leader. Also, participating in the ‘tradition’ also has an identity-sustaining nature. They do what they think they are supposed to do which can create anxiety as it also may threaten identity generated by the question “will we come up with something that is recognized by each other and other stakeholders as valuable?”

Similar to the visioning process, strategizing is seen as a process of interaction. In this process, we cannot be aware how we will respond to others, until we have responded, which informs the next response in an endless chain of interactions where it is impossible to identify at any particular moment how all of this came about. Individual activity is constrained and informed by the activity of others but there are sufficient ambiguities and possibilities to allow for spontaneous improvisation locally, often triggered by encountering the constraints of a particular situation. Of course, power relations mediate this process. Not all improvisational actions will be successful, and we can only ascribe value afterwards anyway.

Mowles (2011, p. 200) concludes that “rather than thinking the most important thing for them to be doing is to identify a niche, or to agree a vision, they would instead spend time in exploration of similarities and differences, how they come to understand who they are and what they are becoming, and how this process shapes what they understand strategy to be. A greater toleration and exploration of the inevitable conflicting interpretations of how people understand what is going on, and their roles, could lead to significantly different outcomes. In Allen’s models, it is difference that makes the big difference… This is a direct challenge to the notion that organisations function best if managers all agree…”. Mowles (2011) does make clear this does not mean strategy and planning are a waste of time, just that they are more provisional than is assumed, even by those that adhere to flexible plans, to be simply adjusted to regular feedback. Strategy rather emerges between people as they co-operate and compete in complex responsive ways.

Mowles (2011) then goes on to critique the idea of targets as he states that thin simplifications of reality are first rendered into thin objectives by managers at a very abstract level, which does not offer much in terms of guidance for staff further down in terms of what to do in their daily lives. Then the next step is to reduce often complex requirements even further into targets. When complex reality is reduced in this way, then this is likely to suppress the very contingent and context specific social practices which help realise the strategies that are put forward.

Indeed, in order to fulfill any of the set objectives, practitioners need to improvise in their specific contexts in response to what others are doing. This continuous interplay of actors makes the future radically uncertain. Actors are always working with imperfect knowledge in an imperfect way, experimenting and improvising as their actions and intentions (which are influenced by much more than just organisationally defined objectives) interweave with those of others. Novelty usually does not arise from conforming to a pre-reflected plan but from an improvisational, often deviant, response to the constraints (often generated by specific power relations) of a particular situation.

This radical unpredictability means it is not possible to set targets as this assumes a capacity to predict what should be achieved. It is then also not useful to incentivise targets as this begs the question: what exactly is being rewarded or punished then? If targets are aggressively pursued (incentivised), then this is likely to call out subversion, rebellion or gaming.

Indeed, as managers up above do not concern themselves with how people lower down interacted with others and why and what happened as a consequence, but only hold others to account for hitting the target, i.e. delivering to the letter what was agreed or imposed, then this can be experienced as oppression. People can take up abstractions and generalisations locally, using their practical knowledge in mutually adaptive ways with others. But if they feel obliged to comply with schemes of understanding that do not square with this experience or values they will resist. This does not just imply manoeuvring for personal gain but also acting to protect work they consider valuable.

Mowles (2011) does assert that it may make sense in very routine jobs to set simple targets as a basis for talking about what an employee is doing, but that there are fewer and fewer jobs like this.

While Mowles (2011) represents a more radical application of complexity theory, Kurtz et al (2003)[[43]](#footnote-43) draw attention to three important distinctions when comparing humans to programmable agents in simulations such as mentioned earlier, as well as to the consequences of this:

* human are not limited to one identity (we can be father, brother, employee, etc.);
* human are not limited to acting in accordance with predetermined rules. We are able to impose structure on our interaction or to disrupt it as a result of collective agreement or individual acts of free will. Therefore, we can impose and maintain order and some degree of predictability. Humans indeed are willing to accept such order;
* humans are not limited to act on local patterns. People can also be aware of large scale patterns because of their ability to communicate abstract concepts through language and more recently the social and technological infrastructure that allows to respond immediately to events half a world away. Therefore, all scales of interaction must be taken into account.

The key difference with Mowles (2011) seems to lie with the second point regarding the degree to which humans can impose and are willing to accept order and to what extent this then results in a measure of predictability. Of course, in many daily (inter)actions, some degree of predictability is apparent e.g. in a fancy restaurant people generally behave according to some implicit rules relating to decorum.

At this point, it is useful to refer to Kurtz et al (2003) for introducing their idea of a central director agent and its constituent agents. Agents need not be a person. They could be anything with agency in a system. It could be a procedure, the lay-out of a room, expectations etc. Strong connections between the director and its constituents, are stated to usually appear as restrictions, constraints of some form to behavior. Therefore, when the links between the central director and constituents are strong, there is stated to be order. However, when connections between constituents are strong, such as through mutual goals and experiences, this is stated to facilitate stable self-organised group patterns that resist change.

This leads Snowden et al (2007) [[44]](#footnote-44) to put forward four domains. In the complex domain, there are weak links between the central director and the constituents and strong ones between the constituents (meaning there is self-organisation through self-constraint rather than central imposition). In the complicated domain there are strong connections between the central director and the constituents as well as between the constituents (meaning that although some order is accepted from above, this is itself constrained by self-imposed order). There may be strong links between the central director and the constituents and weak ones between the constituents (strong top down imposed order only) which is then referred to as the simple domain. Finally, there may be weak links overall which is referred to as the chaotic domain (no organisation at all). Of course to Mowles (2011) these would just be different emanations of the constantly evolving struggle between people within changing power relations. For him all human interactions are always complex. The distinctions by Snowden (2007) however are conceptually useful to explain why indeed sometimes there seems to be more order and hence a greater degree of predictability, even if, fundamentally, this order is temporary and we are not able to say when it will cease. In the view of Mowles, it is a stability that is dynamically maintained by people mutually adapting to each other moment by moment, conditioned by power relations. This is possible because people are able to anticipate the anticipations of others and to create social objects, which are repeated tendencies by many people to act in particular ways. The fundamentally complex nature of all human interaction does means prediction remains a hazardous activity, no matter how stable this interaction may seem at a given time.

Snowden et al (2007) offers some tools for operating in the complex domain (to be understood as a sub-domain of the larger understanding of complexity as put forward by Mowles). He advocates the use of large group techniques to stimulate democratic, interactive, multi-directional discussions. He also advocates to set barriers –(flexible) rules to be respected- within which afterwards self-regulation occurs. Also probes (small experiments, stimuli) are to be launched to stimulate “attractors”. These are phenomena that occur when probes resonate with people. Next, dissent is to be encouraged (e.g. in a formalized way using a method called ritualized dissent) and one should focus on sustaining an environment from which good things can emerge (Google’s famous fixed % time to be devoted to personal projects can be seen as an example). Of course, Mowles (2011) asserts it is not possible to be certain good things can emerge without the possibility of bad ones.

To conclude this section, it is fair to say the complexity based view of management corresponds quite well with what has been asserted earlier in terms of the four main issues:

* that to motivate both challenging and realistic goals may be required: complexity theory confirms the value of organisational vision (as an energizing process of collective promise making) but also asserts, as this paper has done, that it is by definition abstract and will be functionalized differently by people in their different settings. If people are not allowed to do this by a powerful actor that wants to impose one particular view as truth, then this may be experienced as a form of bullying. Similarly, strategizing, is seen as an endless chain of interactions where people improvise in response to each other’s attempts to influence, mediated by power relations. Target setting is in this view seen as problematic as it assumes a form of predictability, which would allow to set the “right” target, that is just not justifiable in the face of complexity. If aggressively pursued, it would again be experienced as a form of oppression. It should be clear that this is a critique of the ruling practice of target setting as a top down system of control rather than as a self-motivational instrument when responding locally to a more abstract goal and in this sense fits perfectly well with the earlier contents of this paper. However, if we follow Snowden et al (2007), then there would be more scope for target setting in the simple and complicated domains as these are stated to have a higher degree of predictability. That this predictability is highly precarious was already explained earlier. However, Snowden et al (2007) also warn about entrained thinking which is a conditioned response that occurs when people are blinded to new ways of thinking exactly because of the perspectives they acquired through previous training, experiences and success. They state this may occur in the simple and complicated domain. In fact, this form of complacency is one of the biggest reasons why things suddenly collapse into chaos. Indeed it is stated that best practice (appropriate in the simple domain) is always yesterdays practice. The same can be said of good practice in the complicated domain (good rather than best as in this domain many possible good solutions may exist for an issue). In the complicated domain it is however experts who exhibit such entrained thinking most, by overlooking innovative, controversial ideas by non-experts. Sometimes the experts reach a stalemate among themselves, unable to figure out something because of individual entrainment, only to be surpassed by events at some point. Indeed, Locke et al (2006b) had already stated in the context of goals setting theory that dysfunctional persistence of goals and strategies are a problem. Their solution was to support constructive conflict (although it is always challenging to understand how one can avoid conflict to turn destructive) and try to maintain a willingness to adapt among people;
* that gaming and cheating will happen as well as other forms of unintended behavior (e.g. supervisors exerting more control on rather than support personal growth of their subordinates). Gaming and cheating are from a complexity perspective just forms of rebellion against attempts to oppress as described in the previous point. In fact, as a response to power-induced constraints, they can be seen as a form of innovation. Furthermore, attempts to increase one’s power in the interactions that constitute organizational life are not the exception but the rule. The entrainment as discussed in the previous point is also associated with this in the form of people (ab)using power to keep things as they are;
* that motivation may be linked to something other than financial gain: here there is recognition of the fact that maneuvering may be for personal gain, to safeguard identity (as in entrainment) as well as to protect what people consider (perhaps more intrinsically) valuable;
* that what may matter may be verifiability not quantitative measurement, given also that some goals may be harder to measure in the latter way: here the response of complexity theory is that targets are abstractions anyway, no matter how specific they pretend to be. The same goes for a vision for which it is asserted that no common meaning can be imposed on others. However, this indirectly supports the idea of mental simulation at the individual level as there is no attempt to make this simulation common with others but aims to help a person to anticipate better what might happen, heightening their readiness for action.

**How SMART is SMART now, really?**

At this point, it is time to consider an answer to the overall question: How SMART is it really to construct governance relations between the EC and the Flemish government on the one hand, and the ESF Agency on the other hand, by making use of so-called SMART objectives? On the basis of the discussions in this paper, it can be said that it is quite smart if **SMART is understood to mean:**

* **regarding specific tasks, in coherence with higher level more abstract goals (specific)…**
* **support the use of mental simulation (e.g in the form of stories) focusing on the process of achieving an outcome, itself mentally simulated and framed as a “growth” oriented goal (measurable)…**
* **at the level of individual staff (assignable) not of the organization or a unit…**
* **ensuring there is enough thought put into considering the complexity of a task as well as constraints, both in terms of what people are able and allowed to do, and hence deciding on appropriately challenging learning or performance objectives linked to strategies that help achieve them (realistic)…**
* **within a specific time constraint relevant to the task (time bound).**

Positive, constructive feed-back, relying on soft judgment of (potentially “dirty” but not “bad”) data collected with a variety of methods (accompanied by an understanding of their limitations), should be used by those that can make use of it, to guarantee a focus on removing obstacles - rather than on being fixated on the degree of shortfall- towards a goal. Accountability towards external stakeholders is delivered as explained by Mowles (2011) by “the way people give an account of what they have done and why, rather than describing in a more limited way if they have hit a target or not”.

**Regrettably, SMART in the current situation of the ESF Agency means exactly the opposite and should perhaps be labeled STUPID:**

* **high level uniform quantitative targets (specific)…**
* **within a standard (mostly one year) period, regardless of the task (timed)…**
* **completely divorced from any discussion regarding constraints or complexity (unrealistic)…**
* **driven by external pressure (pressurized)…**
* **blissfully ignorant of any strategies that could actually help realize the targets (ignorant)…**
* **hence decreasing autonomous and intrinsic motivation (demotivation) as well as ensuing well-being and performance.**

**Of illusions, deterritorialisation and New Public Management: why we are not getting any SMARTER**

So why does this kind of situation prevail, given its problematic nature as evidenced by this paper?

According to Mowles (2011) because it helps sustain the illusion that managers are acting rationally and are in control. Indeed, drawing upon authors like James C. Scott who launched the term “Seeing like a state”, Mowles shows that this is associated with the strong belief in scientific and technical progress linked to industrialisation in Western Europe and North America since the 1830’s. Simplifications, abstractions and generalisation are a key component of this way of thinking. This is required to make social realities legible to state regulators who sit at a distance (e.g. apparent in cadastral map making to be able to determine taxes).

Similar observations come from R. Eyben[[45]](#footnote-45), a former civil servant at the UK Department for International Development, now an academic working for the Institute for Development Studies43 and founder of the “Big Push Forward”, an informal international network of practitioners seeking constructive ways to advance conceptually and methodologically development aid’s support of a fairer world. She frames the debate as one of substantialism versus relationism where the former is concerned with categories, units and entities such as poverty, rights, results, … and the latter with connections and processes. This is also a juxtaposition of an economic (substantialist) versus an anthropological (relation) perspective. She asserts that in international development, the fact that the locus of power historically was situated almost exclusively at the level of donor agencies outside of the country receiving the aid, contributed to the prevalence of the idea that the whole world can be observed and explained from that position and the subsequent development of abstract models detached from everyday reality. She claims the persistence of this is due to the fact that it is difficult to win an election on the basis that policy-making is messy and that civil servants have very little control over what happens. Nevertheless, in domestic affairs, active citizenship and locally based decision-making, as processes, are making headway based on the argument that those closest to the situation are best placed to diagnose, debate and act on it. For development aid, due to the fact that it is de-territorialised, there is less reason to pursue this shift. At this point, it is interesting to note that the EU -level in Structural Funds is also similarly de-territorialised.

A connection can also be made to the kind of values that predominate in the public sector, as done by Hood et al[[46]](#footnote-46):

* the values of being “lean and purposeful”: here, the primary concern is to match narrowly defined tasks and circumstances with resources (time and money) in a competent and sparing fashion. Payment by results, just in time delivery and zero based budgeting can be seen as emanations of this mind-set. Words like effectiveness, efficiency, impact, value for money, achieving targets are very much in line with this. As the main idea is to cut any slack, matching resources as tightly as possible to objectives, it is very important to have “checkable” objectives that are not overlapping. Hence the focus on outputs, ideally to be provided by independent departments;
* “honest and fair”: here the focus is on preventing distortion, bias, abuse of office and inequity. The proper discharge of duties in terms of procedures AND substance is of prime importance. Words like transparency, prevention and detection of fraud, compliance with rules, etc. fit here. The concern here is more “how the job gets done” than just “getting the job done with the least possible input”. Controls shift to process rather than output;
* “robust, resilient, adaptive”: here the concern is to be able to withstand shocks, to keep operating even under the most dire circumstances and to adapt rapidly in a crisis. Words that fit here are diversity, empowerment, sustainability etc. This thinking leads to recognising the importance of back-up systems, maintaining adequate diversity to avoid widespread common failure (including in the social sense e.g. avoiding groupthink) and building in safety margins (e.g. in planning work or using materials).

It is clear that is very hard to address in equal force each of these concepts. For example, maintaining diversity is not, at first sight, so easily reconcilable with cutting slack. Equally, audit procedures to prevent fraud do not tend to be seen as very efficient.

It can, in line with this thinking, be put forward as done by Wauters (2012) that the ruling notion of the traditional public sector bureaucracy before the arrival of New Public Management was linked closely to the concept of “honest and fair”. This classic view of government was then subjected to the influence of “scientific management”. It pushed the view that there was one best way to achieve results. All that was required was to break down complicated tasks into simpler ones, measure routines, codify the most efficient ones and apply rigorous process controls. Lean and purposeful joined honest and fair as a core value, underpinning a specific notion of accountability. As of the 1980s, the doctrine of “New Public Management” (NPM) becomes very influential in many efforts at public reform. It is however itself closely linked to the concept of “lean and purposeful”. In fact, it is rather an extension of the classical model, pushing the separation between policy-making and implementation to new heights, while also intensifying aspects of scientific management, leading to a substantial increase of ex ante controls and ex post quantification.

It may be the dominance of the NPM model since the 1980’s that has led to the uncritical adoption of targets as displayed in the case of the ESF Agency, both by the Flemish government and the EC.

OECD (2011) states however that since 2005 some of the New Public Management reforms are adjusted, revised or even abolished and new trends have come to the fore. More recently (OECD, 2012[[47]](#footnote-47)), an alternative to NPM has come forward under the guise of “Strategic Agility”. This model is more linked to the “robust, resilient and adaptive” concept of accountability.

In addition, J. Bourgon, the former head of the Canadian civil service, has created the New Synthesis of Public Administration which attempts to reconcile elements of NPM with newer models such as Strategic Agility[[48]](#footnote-48).

These developments are acknowledged in Wauters (2012) which provides an entire set of principles and tools to reflect on and to assess for possible use in the management of an organization responsible for deploying a EU Structural Funds programme.

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3. Referred to as “BBB” or “Beter Bestuurlijk Beleid” –“better governance policy”- as described on <http://www2.vlaanderen.be/bbb/index.htm> on 21/05/2013 [↑](#footnote-ref-3)
4. “er is een invulbare informatierelatie, dat betekent onder andere dat de opdracht van het agentschap voldoende stabiel en SMART (specifiek, meetbaar, afgesproken, realistisch, tijdsgebonden) kan worden geformuleerd” as stated on <http://www2.vlaanderen.be/bbb/nieuwe_structuur/1_structuur/soortenagent.htm> retrieved on 21/05/2013 [↑](#footnote-ref-4)
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