

Iterative Planning Processes; Supporting and impeding factors

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Basically, using the phrase “*iterative*” means there is a stepwise movement towards a (the) goal, instead of a “momentary leap” from problem to solution, where, at intervals, the situation is evaluated and necessary steps are taken to ensure the process is “on track” towards the solution. Such steps will normally be like loops, where you go backwards in the step-line and kind of “run it through a new cycle” (see example of Basic Iterative Process/John Wright Company).

This, more “basic” type of an iterative process can normally be found in areas/sectors characterized by relatively simple conditions. “*Simple*” not necessarily as having few influential factors, but what factors exist are relatively well known and proper actions (power to act, toolbox etc.) are also available.

As an example, a quick search of the Internet for the keyword “Iterative processes” mainly caught descriptions of planning situations in business and industry. There were hits regarding oil industry (how to fight fires in oil-wells), mining industry and software design.

The hits regarding more complex planning situations, all stressed the “other side” of iterative processes: That is how to act and behave in situations where many complex factors interact and their behaviour, now and in future, is less than well known.

But, such situations are also iterative; you try, you err, you go back seeking new paths and you evaluate to see if you are getting closer to the desired situation. Thus we see a wide range of situations can be characterised as “iterative”, and accordingly we can describe a range of methods (theories) to cope with them.

From Rational Planning

Instrumental (rational) planning is focussing on finding the best solution to precise and limited questions (see Johansen, 1977). But policy-problems are normally found to show quite a different character:

- Instead of a single issue, several issues arise at the same time
- Instead of limitations regarding time, scope, themes, stakeholders etc, we have interconnections between them

A number of theories and methods have been developed for the transformation from the tools of the analytic (rational) tradition towards the conceptual models for societies and organisations. The tradition of “*muddling through*” is closely linked to Popper's philosophy of falsification, known in social science as “piecemeal engineering” (Popper 1964). One pragmatically solves one problem at a time – the ones one has enough knowledge to solve, the others are left untouched. One uses former solutions until they are proven false.

To Muddling Through

Muddling through is a descriptive theory for continuous adaptation, often used as a strategy in public planning situations. It is used as a model because it can function in situations with high degree of uncertainty. The principle is: *use many small steps in an adaptive and learning process instead of making larger and more fundamental changes*. Because of the interplay between effects and various goals, a mix of various initiatives will emerge. Further, one cannot expect all desired effects to show at once, and effects can be countered by other changes in society and new initiatives or changes in the existing must be implemented to move towards the desired effects. And the desired effect will change due to the development of new/changed goals. The decision-maker thus will have to be prepared to repeat the process continuously and make corrections as he goes along (Popper 1964).

Lindblom (1959) has presented the difference between the traditional rationalist approach and muddling through like this:

Rational Planning Root-method (Banfield)	"Muddling Through" Branch-method (Lindblom)
All values are defined and used as basis for planning	Values are chosen; partial as opposed to global goals
Objective – means - analysis	As objectives and means can not be clearly distinguished, the analysis will only be partial
Testing of "good policy", choose "The Best"	"Good Policy" emerges as several analysts and politicians find that they agree on the action or on the policy
Comprehensive analysis, all decisive factors taken into account	Limited analysis, important consequences, alternatives and goals are neglected
Leaning heavily on theory	Process of successive comparisons reduces need for theory

Ideally it would be desirable to clarify all values and all interests, and use this as a basis for goals. But it is not realistic to believe this to be reached in practice. Complex and changeable structures in society will always be opposing each other. Often there will be no political clarification as to which values are essential, and there might not be a majority for any of the opposing values. This you have to live with in the real world. Normally this leaves to choose between marginally different changes within the existing set of values; a series of small steps based on dialogue and argumentation.

Thus "muddling through" can be an useful tool if we have long-time goals and visions to support us, or at least an understanding of what kind of future situations we want to avoid (Brox, 1995). At the same time the "control" over the means is rather low. The model is often used to describe the tactics one has to follow to reach the long-term goals:

- The long-term goals formulated in a strategic plan
- This can intermediate be adapted through the administrative planning, and
- The daily operative work

The model presupposes a strong and centralised management, managing through the larger lines and leaving the adaptation to subordinate levels. It also presupposes that the antagonists have the same kind of power; a fight between equals.

Necessary features of an iterative process:

The most decisive feature of an iterative process will be that it has *loops* of various kinds. That is to say that at intervals evaluation is conducted to see if goals are reached, and changes need to be implemented.

According to the degree of uncertainty, the type of planning situation etc, this looping can take various forms, still in all kinds we can identify some characteristic stages that always will be present:

- **Problem formulation**

- Define time-scope: a cyclic and rolling way of planning (e.g. linking yearly budgets to yearly programs). Also system of multiple time-scopes (long, medium and short range)
- Define situation: even within a year there are large amounts of information, various tasks etc. This calls for a need to divide into partial activities – preferably not inter-connected. Also apply framework budgeting; subordinate freedom within given frames
- Stakeholder definition; in rational planning there is little focus on stakeholder participation. One presupposes that the decision-maker has complete knowledge of all consequences. This normally does not hold in practice, and has led to an increasing pressure for more participation in social processes. Democratisation and participation are closely connected to mobilisation and implementation. But who are to be mobilised in the various situations (costs of mobilisation)?

- **Information gathering**

- Strengths and weaknesses, opportunities and threats. Attempt to describe the situation at hand as far as existing knowledge can go
- Stakeholder identification, level of mobilisation, how to mobilise? Activities to make stakeholder-participation active and more intense
- Response from the Civic Society. Local and regional organisations, inhabitants etc.

- **Vision building**

- Expression of the desired outcome(s). Use the involvement and the description to formulate understandable visions/goals for the future and suggest how to get there
- Supported by stakeholders? Crucial to success is to have stakeholders "internalising" the vision. On the other hand this normally craves active participation in formulation process.

- **Strategy-forming**

- Flexible and dynamic organisations
- Responsibilities; who is to do what and when
- Equal power to participants, or agreement on the distribution of power

- **Implementation**

- Power to the participants to implement actions
- Partnership forming
- Individual as well as collective actions
- Have visible activities and "rewards" for achieving goals

- **Evaluation**


- There is need for active reporting systems that enables the assessment of results and formulation of new goals and changes in framework
- Open and democratic processes and information systems
- Changes of attitudes as well as actions according to experiences

Below is an attempt to distinguish between some important criteria in various types of planning processes.

	Rational planning	Muddling through		
		Rolling cycles	Inward spiral	Outward spiral "Continuous learning"
<i>Uncertainty</i>	Low			High
<i>Defined goals</i>	High degree			Low degree
<i>Measurability</i>	High	High	Medium/low	Medium/low
<i>Solution</i>	"Optimum"	The best	Developed through process	Develop knowledge through process
<i>Time-scope</i>	Well defined	Defined to interval, e.g. fiscal year		Described as more continuous, still linked to "natural intervals"
<i>Situation</i>	Comprehensive	Subdividing	Choosing desired elements	Depending at all time on outcome of process
<i>Stakeholders</i>	Planners have complete knowledge	Active at evaluation stages	Active mobilisation	"Continuous mobilisation process"
<i>Power</i>	Monolithic. Planner = Power	Centralised, with distributed power		Equal power to stakeholders
<i>Evaluation</i>	Full knowledge makes evaluation obsolete	E.g. at yearly intervals	Continuous evaluation	Continuous evaluation

From the traditional rationalist model on the left to a model of "Continuous learning" on the right, various aspects of iterative processes are grouped in three categories: Rolling Cycles, Inward Spiral and Outward Spiral. Criteria displayed either as continuous intervals (e.g. low to high degree), or by outstanding characteristics.

For our use here, we can keep the heading of the table above. "Degree of iterativity" can be described on a scale from the rational planning models to continuous learning models/models having communicative characteristics:

Rational Planning		"Continuous Learning"
(LOW)	<i>"Degree of Iterativity"</i>	(HIGH)

On this scale it can be fruitful to discuss supporting and impeding factors, building upon the various features used to describe iterative processes above and trying to link them to chal-

allenges faced e.g. in NFP's. Bear in mind that these processes normally always will be iterative – to a degree. The low – high scale is basically there to describe how well suited a model, a process or a means will be in normal (that is “complex”) policy planning situations.

“Degree of iterativity”

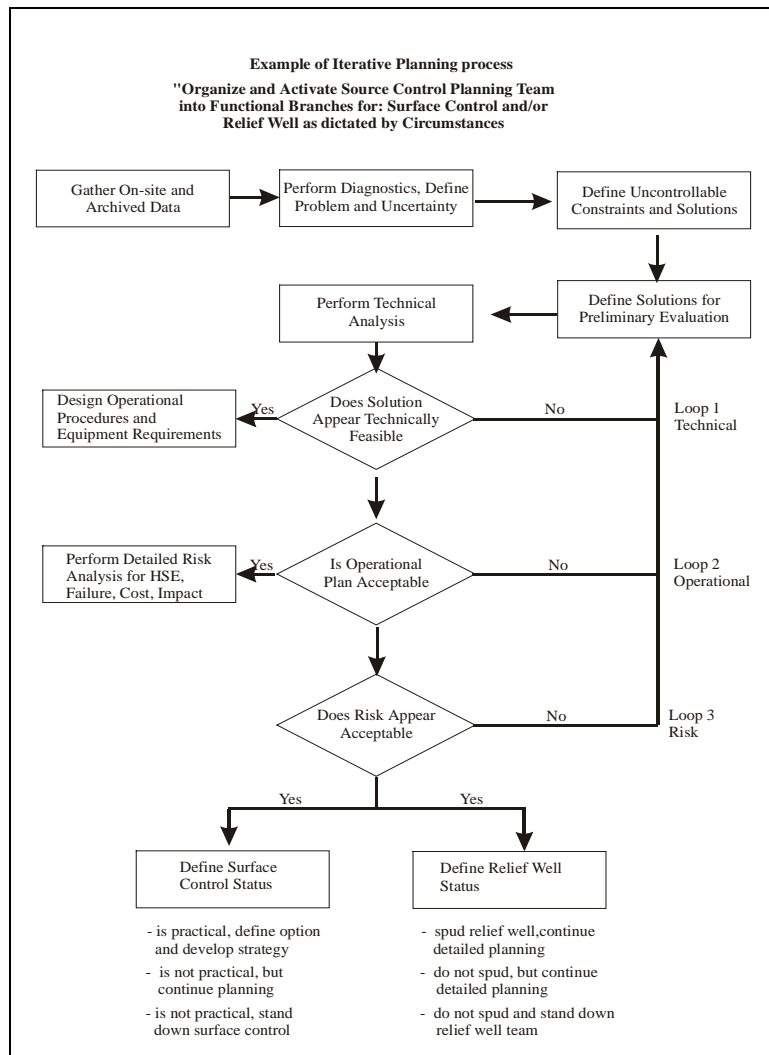
Low	High
1a The process is focussing mainly on quantitative issues	1b The process is focussing more on qualitative issues
2a Objective involvement: me - them	2b Subjective involvement: you and me
3a Process characterised by non-symmetry in power: Authority - command	3b Process characterized by equality in power
4a Participation on a low level: Information – one-way communication	4b Participation can be characterized as dialogue - empowered discourse
5a The process characterised as being problem-limited and solution-oriented	5b Process is characterised by the use of holistic and comprehensive strategies
6a Comprehensive situation analysis , all relevant factors taken into consideration from outset	6b The process described as a complex situation , which is dependant at all times to outcome of process
7a There is a well-defined time-scope . Time = schedule	7b The time frame is considered to be continuous . Time = maturity
8a The goals are from the outset well defined	8b The goals are seldom precisely defined
9a Expected high degree of measurability	9b Expected low degree of measurability
10a Aiming for the “optimal” solution(s)	10b Expecting to develop knowledge about the issue through the process
11a The process can be described as having a low degree of uncertainty	11b The process can be described by having a high degree of uncertainty
12a Planners have complete knowledge of all stakeholders	12b Number of stakeholders responsive to a Continuous mobilization process
13a Full knowledge of all important factors makes evaluation more instrumental than influential (“technical reporting”)	13b High degree of uncertainty and an open process gives a continous need for evaluation to use in forming the ongoing process
14a Welfare as a set of goods – ”client/customer”	14b Welfare as control over own situation

Examples of types of Iterative processes:

Basic Iterative process

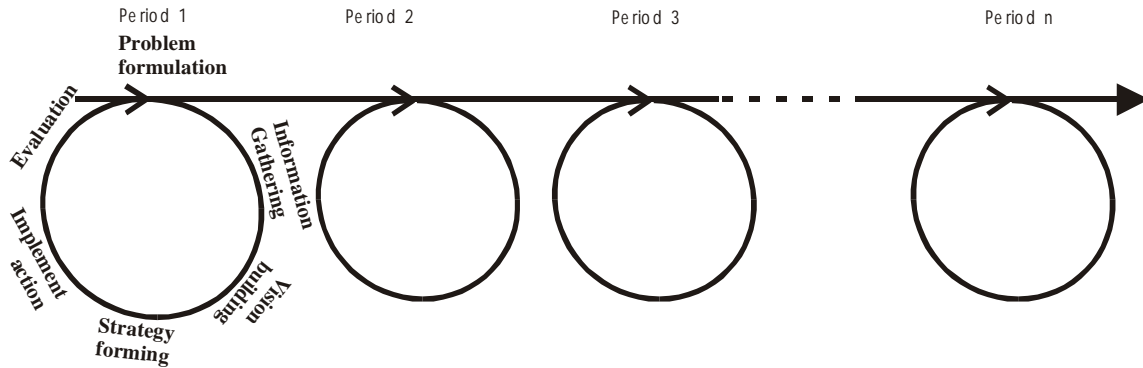
(Source: John Wright Company, 2001; Internet Download)

As the Initial Planning Cycle flowchart shows, you must first: gather data; define the problem to solve, including uncertainty; define constraints and finally define potential solutions for analysis. This is the starting point for iterative planning. If analysis indicates that a solution is, or may be, practical, the team continues with detail planning to the next iterative loop. At each loop (technical, operational and risk) the team analyses the solution and either continues with the planning process or loops back to analyse a new or modified solution



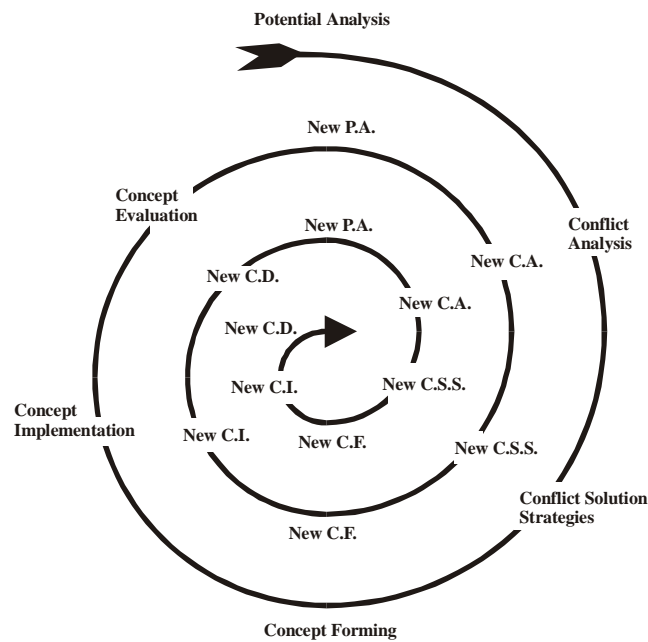
Planning as a Rolling Cycle

Loops repeated at set intervals. Actions will be taken according to the realised outcome at the time of evaluation (periodically).



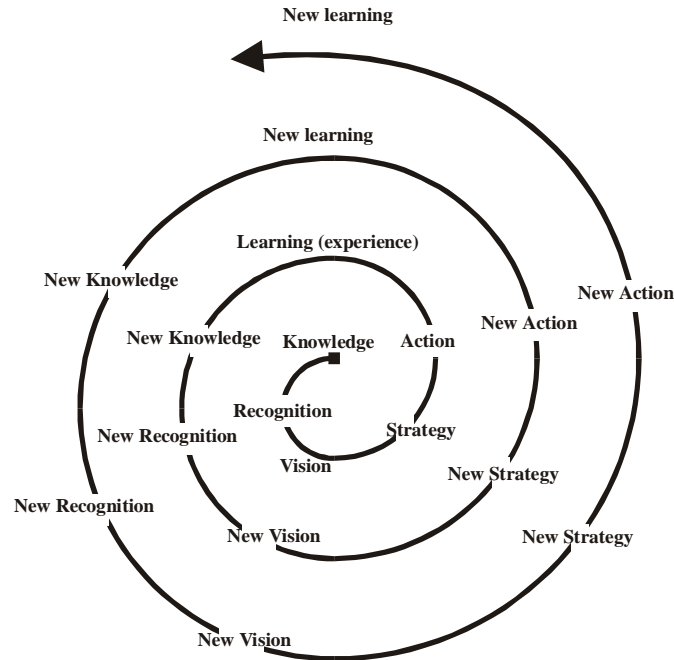
Planning as an inward spiral

Process characterised by a belief that there exists a solution, and that it is possible to reach that solution by a system of using a stepwise approach to get increasingly closer



Planning as an outward spiral (Continuous learning)

This differs from the inward spiral model in the fact that this model is initially open to “any kind of solution”. There is a high degree of openness in all stages, and a willingness to accept that change may change the goals. It basically describes a situation where a motivation to learn is dominant, to seek knowledge and thus be better prepared to handle various situations



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