A GLOSSARY OF TERMS FOR MEGA THINKING AND PLANNING

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Professionals are responsible for the results, consequences, and payoffs they deliver. This requires a renewed focus on the evidence-based decisions. Critical for this is a consistency in language that leaves no confusion regarding the value added for individuals, organization, and society. This glossary provides a basis for defining and achieving success in the future through a definition of terms that focuses on the results and payoffs for internal and external clients instead of the processes, activities, and interventions we routinely apply.

A REQUIREMENT TO DELIVER VALUE ADDED FOR EXTERNAL CLIENTS AND SOCIETY

We are increasingly responsible for results, consequences, and payoffs of our actions and inactions. We no longer have the luxury of leaving such questions and issues to leaders, supervisors, and executives.

The new era we face involves defining and achieving useful results for all stakeholders, including both internal and external partners. We must prove the value we add in terms of empirical data about what we deliver, what it accomplished, and what value it added for all stakeholders (not just the value it added to our team, our department, or our organization, but to the entire system of internal and external partners, including our shared society). We can no longer get away with "feel good" discussions of how we increased the efficiency of processes that may or may not add value to all our clients and society at large.

OUR LANGUAGE—TERMS WE USE AND WHY WE SHOULD BE PRECISE

People in our field tend to use many of the same terms differently, and that is confusing. We might be reminded of Humpty Dumpty's conversation with Alice (Carroll, 1865):

When I use a word," Humpty Dumpty said, in rather a scornful tone, "it means just what I choose it to mean—neither more nor less."

The question is," said Alice, "whether you can make words mean so many different things."

We become precise in many areas where getting useful results is vital, and I suggest the same should be true in our field, where we are literally intervening in people's lives. This glossary is intended to contribute to the rigor and to our measurable success. What does it take, and what might we have to overcome?

Most of our performance improvement approaches and methods, including the language we use in describing our profession, commonly leave questions unanswered concerning value added. We tend to talk about means (e.g., HRD, Lean Six Sigma, HPT, ADDIE, design thinking, and online programs), and not ends (e.g., reduction in poverty, client value added, legitimate profits, product utility, and rates of death). Our language seems almost to encourage a degree of confusion that "allows" for lack of precision and consequences as well as moving us to look at situations in reactive terms, solving problems rather than first assuring that we don't deal with symptoms but with basic roots and causes.

Performance professionals must know how to improve performance as well as how to justify why an individual

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or organization should improve performance. For in addition to justifying what we use, do, accomplish, and deliver, the new reality is that we must all now prove that there are useful results to both the client and to society. From a societal perspective, value added includes the survival, health, and well-being of all partners.

Planning for and achieving results at the societal level value added for tomorrow's child—is termed *Mega planning* and our orientation toward that is *strategic thinking*. (Kaufman, 1992, 1998, 2000, 2006, 2013). It is this system (society) that best begins our planning and serves as the basis for our evaluation and continual improvement. To be successful in planning for and demonstrating value added, we must use words with rigor and precision. Language that is crisp, to the point, and focused on results is essential for professional success; we must match our promises with deeds and payoffs that measurably add value.

System, Systems, Systematic, and Systemic: Related but Not the Same

To set the framework, let's define these basic terms, relate them, and then use them to put other vocabulary in context.

- *System approach*: Begins with the sum total of parts working independently and together to achieve a useful result at the societal level, adding value for all internal and external partners. We best think of it is the large whole (see Figure 1).
- *Systems approach*: Begins with the parts of a system the subsystems—that make up the "system" (see Figure 1).

It should be noted here that the "system" is made up of smaller elements, or subsystems, shown as "bubbles" imbedded in the larger system. If we start at this smaller level, we will start with a part and not the whole. So, when people say they are using a "systems approach," they are really focusing on one or more subsystems. They may be focusing on the parts and missing connections to and within the whole. When planning and doing at this level, they can only assume that the payoffs and consequences will add up to something useful to society and external clients, and this is usually just assumed.



FIGURE 1. REPRESENTATIONS OF SYSTEM APPROACH AND SYSTEMS APPROACH

People in our field tend to use many of the same terms differently, and that is confusing.

- *Systematic approach:* An approach that does things in an orderly, predictable, and controlled manner. It is a reproducible process. Doing things, however, in a systematic manner does not assure the achievement of useful results.
- *Systemic approach:* An approach that affects everything in the system. The definition of "the system" is usually left up to the practitioner and may or not include external clients and society. It does not necessarily mean that when something is systemic it is also useful.

Interestingly, these terms are often used interchangeably. Yet they are not the same. Notice that when the words are used interchangeably, and/or when one starts at the systems level and not the system level, it will mean that we might not add value to external clients and society.

A PRIMARY FOCUS ON SURVIVAL, HEALTH, AND WELL-BEING—THE MEGA LEVEL—IS REALLY IMPORTANT

We must focus, proactively, on societal payoffs, on a *system approach* for both survival and ethical reasons. We should ask,

With which organizations that you personally do business with do you expect to really put your health, safety, and well-being at the top of the list of what they must deliver?

It is the rare individual who, personally, does not care whether the organizations that impact their lives have a primary focus and accountability for survival, health, welfare, and societal payoffs. Most people, regardless of culture, want safety, health, and well-being to be the top priority of everyone they deal with.

What we do and deliver must be the same as what we demand of others. So, if we want Mega value added for society—to be at the top of the list for others (e.g., airlines, government, military, environmentalists, software manufacturers)—why don't we do unto others as we would have them do unto us? We too often don't formally include external-client survival and well-being in our performance plans, programs, and delivery. We rarely start our plans or programs with an "outside-the-organization" outcome clearly and rigorously stated before selecting the organizational results and resources (outputs, products, processes, and inputs).

Most conventional approaches are analytic-deductive and simply seek to improve whatever is in place. A system approach is one of a few (including performance architecture and design thinking) that encourages proactive determination of what will be best for the clients, not just what they say they want,

The following definitions come from a review of the literature and other writings. Many of the references and related readings from a wide variety of sources appear at the end of the glossary. Italics provide some rationale for a possible perspective shift from conventional and comfortable to societal value added.

BASIC TERMS, DEFINITIONS, AND COMMENTS

Here are basic terms, definitions, and comments.

ADDIE model: A contraction of the conventional instructional systems steps of analysis, design, development, implementation, and evaluation. *It ignores or assumes an up-front determination through assessment of what to* analyze, and it assumes that the evaluation data will be used for continual improvement. When poorly applied, it can be slow, rigid, and move in lock-step.

AADDIE model: Model proposed by Ingrid Guerra-Lopez that adds *assessment* to the ADDIE model. This provides a referent that places justification of why do this before analysis. Starting with analysis assumes that what is to be done is valid and valuable.

- **Analysis.** Breaking of something down to its constituent component parts to better understand it. *Starting with analysis does not guarantee that what is being analyzed will render data that is useful or correct in adding value to the entire value chain.*
- Data science/big data. The use of predictive analytics, user-behavior analytics, neural networks, or other advanced data-analytic methods that extract insights and value from data. Analysis of data sets can find, for example, new correlations to spot business trends, prevent diseases, combat crime, and so forth. It is a "concept to unify statistics, data analysis, and their related methods" to understand and analyze actual phenomena through the data the phenomena create. *This is increasingly important for Mega planning applications that require making sense of information within and across organizations and governments to assure holistic bases*.
- **Change creation**: The definition and justification, proactively, of new and justifiable destinations. If this is done before change management, acceptance is more likely. *This is a proactive orientation for change and differs from the more usual "change management" in that it identifies in advance where individuals and organizations are headed rather than waiting for change to occur and then be "managed."*
- **Change management**: Assuring that whatever change is selected will be accepted and implemented successfully by people in the organization. *Change management is reactive in that it waits until change requirements have been either defined or imposed and then moves to have the change accepted and used.*
- **Competence**. The demonstrated ability to consistently perform at or beyond criteria. Having relevant knowledge and skills may support competence, but this is an insufficient indication of competence.
- **Continual/continuous improvement**. The on-going check of results with intentions so that changes may be made during an intervention or program. This is a form of formative evaluation where progress and results are constantly applied to ensure best results.
- **Costs-consequences analysis**: The process of estimating return on investment before an intervention is implemented. It asks two basic questions simultaneously: What do you expect to give? and What do you expect

to get back in terms of results? *Most formulations do not compute costs and consequences for society and externalclient (Mega) return on investment. Thus, even the calculations for standard approaches steer away from the vital consideration of self-sufficiency, health, and well-being.*

- **Criteria**: Precise and rigorous specifications that allow one to prove what has been or must be accomplished. Many processes in place today do not use rigorous indicators for expected performance. If criteria are "loose" or unclear, there is no realistic basis for evaluation and continuous improvement. Loose criteria often meet the comfort test, but this doesn't allow for the humanistic approach to care enough about others to define, with stakeholders, where you are headed and how to tell when you have or have not arrived.
- **Deep change**: Change that extends from Mega—societal value added—downward into the organization to define and shape macro, micro, processes, and inputs. It is termed "deep change" to note that it is not superficial or just cosmetic, or even a splintered quick fix. *Most planning models do not include Mega results in the change process and thus miss the opportunity to find out what impact their contributions and results have on external clients and society. The other approaches might be termed "superficial change" or "limited change" in that they focus only on an organization or on a small part of an organization.*
- **Desired results**: Ends (or results) identified through needs assessments that are derived from soft data relating to "perceived needs." "Desired" indicates these are perceptual and personal in nature.
- **Ends:** Results, achievements, consequences, payoffs, and/or impacts. The more precise the results, the more likely that reasonable methods and means can be considered, implemented, and evaluated. Without rigor for results statements, confusion can take the place of successful performance. *There are three levels of ends: in-dividual contributions (Micro/products), organizational contributions (Macro/outputs) and societal contributions (Mega/outcomes). Success requires the linking and aligning of all three levels of results.*
- **Ethics**. Knowing the right and socially responsible thing to do and doing it.
- **Evidence-based practice**. The use of research and/or operational performance data that demonstrates the relationship between interventions and consequences.
- **Evaluation**: Compares current status (what is) with intended status (what was intended) and is most commonly done only after an intervention has been implemented. Unfortunately, "evaluation" is used for blaming and not for fixing or improving. When blame follows evaluation, people tend to avoid the means and criteria for

evaluation or leave them so loose that any result can be explained away.

- **External-needs assessment**: Determining and prioritizing gaps, then selecting problems to be resolved at the Mega level. This level of needs assessment is most often missing from conventional approaches. Without the data from it, one cannot be certain that there will be strategic alignment from internal results to external value added.
- **Gap analysis**. Identifying the performance differences between current and desired results. *This might be considered a variant of needs assessment but limits itself to identifying gaps without being concerned with the relevance of the gaps*.
- **Hard data**: Performance data that is based on objectives and is independently verifiable. *This type of data is critical. It should be used along with "soft" or perception data.*
- **Ideal vision**: The measurable definition of the kind of world we, together with others, commit to help deliver for tomorrow's children. *An ideal vision defines the Mega level of planning. It allows an organization and all of its partners to define where they are headed and how to tell when they are getting there or getting closer. It provides the rationality and reasons for an organizational mission objective.*
- Human performance technology (HPT). An approach that analyzes performance problems, identifies causes of the problems, identifies and develops effective and efficient ways and means to resolve the problems, and then evaluates the results. *Because this approach usually starts with analysis, it might assume that the problems identified are valid. (See the AADIE approach defined previously.)* It also might signal to restrict improvement to individual performance and not to include the total organization and external clients.
- Human resource development (HRD). The actions within an organization to improve the contributions the individuals can and should make to deliver useful results. Incentives. The rewards, both tangible and psychological,
- that are provided to stimulate useful performance.
- **Inputs**: The ingredients, raw materials, and physical and human resources that an organization can use in its processes to deliver useful ends. *These ingredients and resources are often the only considerations made during planning without determining the value they add internally and externally to the organization.*
- **Internal needs assessment**: Determining and prioritizing gaps, then selecting problems to be resolved at the Micro and Macro levels. *Most conventional and popular needs-assessment processes are of this variety.*
- **Iterative design**: A set of methodologies based on a continual and cyclic process of prototyping, testing, analyzing, and continually refining a product or process. This

is a form of applied research for evolving a project, as successive versions or iterations of a design are implemented, before the final product is delivered. Variations of this process are applied in many fields. For example, design thinking is a method for practical creative resolution of problems. It is a form of solution-based thinking with the intent of producing a constructive future result. The successive approximation model (SAM) applies the method to learning systems design and development. Also of this genre is rapid prototyping. *These are useful when a validated problem is being resolved. It can uncouple processes within linear-design and development approaches. Variations of these are routinely also seen in some existing design approaches that use formative evaluation and continual improvement.*

- Lean Six Sigma. A managerial concept intended to result in the elimination or reduction of seven kinds of waste, including defects, overproduction transportation, waiting inventory, motion, and over-processing. Measurement usually involves reducing the variability of what is produced.
- **Learning**: The demonstrated acquisition of a skill, knowledge, attitude, and/or ability not attributed to growth or maturation. *The literature is replete with learning models and frameworks that vary in their validity.*
- Learning organization: An organization that sets measurable performance standards and constantly compares its results and their consequences with what is required. Learning organizations use performance data, related to an ideal vision and the primary mission objective, to decide what to change and what to continue. They learn from their performance and contributions. Learning organizations may obtain the highest level of success by strategic thinking: focusing everything that is used, done, produced, and delivered on Mega results—societal value added. *Many conventional definitions do not link* the "learning" to societal value added. If there is no external societal linking, it could well guide one away from the new requirements.
- **Macro level of planning**: Planning focused on the organization itself as the primary client and beneficiary of what is planned and delivered. *This is the conventional starting and stopping place for existing planning approaches.*
- **Means:** Processes, activities, resources, methods, or techniques used to deliver a result. Means are useful only to the extent that they deliver useful results, at all three levels of planned results: Mega, Macro, and Micro.
- **Mega-level of planning**: Planning focused on external clients, including customers/citizens and the community and society that the organization serves. This is the usual planning level missing in most formulations. It is the only one that will focus on societal value added—the

survival, self-sufficiency, and quality of life of all partners. It is suggested that this type of planning is imperative for arriving at and proving useful results. Mega planning consists of six steps or elements for defining and delivering a preferred future:

Defining the priority needs-gaps in results at the societal level to be reduced or eliminated

Deriving the tactical and operational plans Making/buying/obtaining resources Implementation, simultaneously at all steps Determining effectiveness and efficiency Continual improvement/formative evaluation

- It is proactive and does not assume that the presenting situation is what should be improved but rather identifies needsgaps in results at the societal level and then prioritizes them based on the costs to meet the needs as compared with the costs for ignoring them.
- **Mega thinking**: Seeing and acting on every situation, problem, or opportunity in terms of what you use, do, produce, and deliver as having to add value to external clients and society. Same as strategic thinking. *It is proactive and does not assume that the presenting situation is what should be improved but rather identifies needs-gaps in results at the societal level and then prioritizes them on the basis of the costs to meet the needs as compared with the costs for ignoring them.*
- Methods—means analysis: Identifies possible tactics and tools for meeting the needs identified in a "system analysis." The methods-means analysis identifies the possible ways and means to meet the needs and achieve the detailed objectives that are identified in this Mega plan, but does not select them. *Interestingly, this is a comfortable place where some operational planning starts. Thus, it either assumes or ignores the requirement to measurably add value within and outside the organization.*
- **Micro-level planning**: Planning focused on individuals or small groups (such as desired and required competencies of associates or supplier competencies). Planning for building-block results. *This also is a comfortable place where some operational planning starts. Starting here usually assumes or ignores the requirement to measurably add value to the entire organization as well as to outside the organization.*

Mission analysis: Analysis step that identifies:

- The results and consequences that are to be achieved.
- The criteria (in interval and/or ratio scale terms) that will be used to determine success.
- The building-block results and the order of their completion (functions)that are required to move from the current results to the desired state of affairs.

- Most mission objectives have not been formally linked to Mega results and consequences, and thus strategic alignment with "where the clients are" is usually missing.
- **Mission objective:** An exact, performance-based statement of an organization's overall intended results that it can and should deliver to external clients and society. *A mission objective is measurable on an interval or ratio scale, so it states not only "where are we headed" but also adds "how we will know when we have arrived." A mission objective is best linked to Mega levels of planning and the ideal vision to assure societal value added.*
- **Mission statement**: An organization's Macro-level "general purpose." A mission statement is measurable only on a nominal or ordinal scale of measurement, states only "where are we headed," and leaves off rigorous criteria for determining how one measures successful accomplishment.
- **Need**: The gap between current results and desired or required results. *This is where a lot of planning "goes off the rails." By defining any gap as a "need" one fails to distinguish between means and ends and thus confuses* **what** *and* **how**. If "need" is defined as a gap in results, there is a triple bonus:
- 1. It states the objectives (what should be).
- 2. It contains the evaluation and continuous improvement criteria (what should be).
- 3. It provides the basis for justifying any proposal by using both ends of a need (what is and what should be) in terms of results. Proof can be given for the costs to meet the need as well as the costs to ignore the need.
- Needs analysis: Taking the determined gaps between adjacent organizational elements and finding the causes of the inability for delivering required results. A needs analysis also identifies possible ways and means to close the gaps in results—needs—but does not select them. Unfortunately, "needs analysis" is usually used interchangeably with "needs assessment." They are not the same. How does one "analyze" something (such as a need) before knowing what should be analyzed? First assess the needs, then analyze them.
- **Needs assessment**: A formal process that identifies and documents gaps between current and desired and/or required results, arranges them in order of priority on the basis of the cost to meet the need as compared with the cost of ignoring it, and selects problems to be resolved. *Starting with a needs assessment, justifiable performance data, and the gaps between what is and what should be will provide the realistic and rational reason for both what to change as well as what to continue.*
- **Objectives**: Precise statement of purpose or destination to which are we headed and how we will be able to tell when

we have arrived. The four parts to an objective are as follows:

- 1. What result is to be demonstrated?
- 2. Who or what will demonstrate the result?
- 3. Where will the result be observed?
- 4. What interval or ratio scale criteria will be used?
- Loose or process-oriented objectives will confuse everyone.
- **Operations**: The identification and verification of what Micro/product results are to be achieved and then the determination of what it takes to accomplish them.
- **Operational planning**. Starts at the Micro/product level and is based on or assumes that the needs and associated requirements at the higher levels are known and correct.
- **Outcomes:** Results and payoffs at the external client and societal/Mega level. *Outcomes are results that add value to society, community, and external clients of the organiza-tion.* These are results at the Mega level of planning, sometimes understood as "impact." Please see "value chain" discussed subsequently.
- **Outputs**: The results and payoffs that an organization can or does deliver outside of itself to external clients and society. These are results at the Macro level of planning where the primary client and beneficiary is the organization itself. It does not formally link to outcomes and societal well-being unless it is derived from outcomes and the ideal (Mega) vision. Also see "value chain" discussed subsequently.
- **Paradigm**: The framework and ground rules individuals use to filter reality and to understand the world around them. It is vital that people have common paradigms that guide them. That is one of the functions of the Mega level of planning and outcomes so that everyone is headed to a common destination and may uniquely contribute to that journey.
- **Performance**: A result or consequence of any intervention or activity, including individual, team, or organization— an end.
- **Performance accomplishment system (PAS)**: Any of a variety of interventions (such as instructional systems design and development, quality management/continuous improvement, benchmarking, reengineering, and the like, that are results oriented and are intended to obtain positive results. These are usually focused at the Micro/products level. *This is a preferred alternative to the rather sterile term "performance technology" that often steers people toward hardware and premature solutions.*
- **Performance architecture**. An approach developed by Roger Addison that is, like Mega planning, holistic. The elements used include work, worker, workplace, and world.



FIGURE 2. SIX-STEP PROBLEM-SOLVING PROCESS

- **Performance improvement.** An attempt to reduce or eliminate the gaps between current results and desired results. This may be applied to individuals, to organizations, or to society/communities. Performance improvement usually focuses on Macro or Micro levels of results.
- **Processes:** The means, processes, activities, procedures, interventions, programs, and initiatives an organization can or does use to deliver useful ends. *While most planners start here, it is dangerous not to derive the processes and inputs from what an organization must deliver and the payoffs for external clients.*
- **Products**: The building-block results and payoffs of individuals and small groups that form the basis of what an organization produces and delivers inside as well as outside of itself, along with the payoffs for external clients and society. *Products are results at the Micro level of planning. Also see "value chain" discussed subsequently.*
- **Quasi-need:** A gap in a method, resource, or process. Many so-called "needs assessments" are really quasi-needs assessments since they tend to pay immediate attention to means (such as training) before defining and justifying the ends and consequences.
- **Rapid prototyping (rapid-application development)**. Puts less emphasis on planning and more emphasis on process. In contrast to conventional models, which call for rigorously defined specifications to be established before entering the development phase, this approach emphasizes adaptability and the necessity of adjusting requirements in response to knowledge gained as the project progresses. *Moves away from linear design and development*.
- **Required results**: Ends, results, and impacts identified through needs assessment, which are derived from hard data relating to objective performance measures.
- **Results**: Ends, products, outputs, outcomes; accomplishments, and consequences. *Also see "value chain" discussed subsequently.*
- **Six-step problem-solving process.** A process for identifying, justifying, and resolving problems. At any point, progress is checked against performance requirements so that appropriate changes can be made. *Because there*

is a requirement to revise as required anywhere during a program, project, or activity, this is like SAM and rapid prototyping.

- **Soft data**: Personal perceptions of results. Soft data is not independently verifiable. While people's perceptions are reality for them, they are not to be relied on without relating to hard, /independently verifiable data as well.
- **Strategy**. The identification and verification of what Mega/societal results are to be achieved followed by the determination of what it takes to get that accomplished
- **Strategic alignment/front-end alignment**. The linking of Mega/outcomes, Macro/outputs, and Micro/product-level planning and results with each other and with processes and inputs. *By formally deriving what the organization uses, does, produces, and delivers to Mega/external payoffs, strategic alignment is complete.*
- **Strategic planning**. A proactive approach that starts by identifying gaps between current and desired societal results, putting these needs in priority order, selecting the needs to be reduced, and providing the measurable criteria for closing those gaps. *Strategic planning starts with Mega*.
- **Strategic thinking**: Approaching any problem, program, project, activity, or effort by noting that everything that is used, done, produced, and delivered must add value for external clients and society. *Strategic thinking starts with Mega.*
- **Subject-matter/domain expert.** A person with special skills and knowledge in an area of endeavor. *It is important to ensure that this individual understands both what is currently being done as well as what might better be done.*
- **System analysis**: Identifies and justifies what should be accomplished based on an ideal/Mega vision and is results focused. It is a series of analytic steps that includes mission analysis, function analysis, and (if selected) task analysis. It also identifies possible methods and means (methods-means analysis) but does not select the methods or means. *This starts with rolling-down (from outside to inside the organization) linkages to Mega.*

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Macro/Outputs (Organizational Contributions)

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Micro/Products¹ (Individual Contributions)

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Processes

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Inputs

FIGURE 3. VALUE CHAIN

- **Systems analysis:** Identifies the most effective and efficient ways and means to achieve required results. Solutions- and tactics-focused. *This is an internal, inside-the-organization process.*
- **Tactics**. The identification and verification of what Macro/organizational results are to be achieved followed by the determination of what it takes to accomplish it. *Best derived from the strategic plan.*
- **Tactical planning**: Identifying what is available to get from what is to what should be at the Macro/organizational level. *Tactics are best identified after the overall mission has been selected based on its linkages and contributions to external client and societal (ideal vision) results and consequences.*
- **Value chain**. The five linked levels of resources, methods and activities, individual performance, organizational performance, and value added outside the organization (see Figure 3).
- 1. **Wants**: Preferred methods and means assumed to be capable of meeting needs.
- 2. What is: Current operational results and consequences. These could be for an individual, an organization, and/or for society.
- 3. What should be: Desired or required operational results and consequences. These could be for an individual, an organization, and/or society.
- 4. **Wishes** Desires concerning means and interventions. It is important not to confuse "wishes" with needs.

MAKING SENSE OF DEFINITIONS AND THEIR CONTRIBUTION TO A MEGA PERSPECTIVE

What we may surmise by a close consideration of the foregoing definitions and the consideration of the possible differences between conventional use and what is suggested here are the following:

- System approach ≠ systems approach ≠ systematic approach ≠ systemic approach.
- Mega level planning ≠ Macro level planning ≠ Micro level planning.
- Means \neq ends.
- Outcome \neq Output \neq Product \neq Process \neq Input.
- There are three levels of planning: Mega, Macro, and Micro, and three related types of results: outcomes, outputs, and products.
- Need is a gap in results, not a gap in process or input.
- Needs assessment ≠ needs analysis (or front-end analysis, or problem analysis).
- Strategic planning ≠ tactical planning ≠ operational planning.
- Change creation ≠ change management. 💥

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