

Building Out Human Sigma in Organizations:

Using the Constructive-Developmental Frame (CDF) in Transformational Interventions

**Originally presented to the European Commission, Directorate
for Learning and Development, November 2006.**

Otto E. Laske PhD, PsyD

**Founder & Director
Interdevelopmental Institute (IDM)
Medford (Boston), MA, USA**

www.interdevelopmentals.org

Agenda

1. Human Sigma from an Adult-Developmental Perspective 3
2. Historical Background of Adult Developmental Research 11
3. Organizational Case Study 18
4. Matching Two Organizational Architectures 31
5. Description of Developmental Levels 42
6. Action Learning and Coaching 66
7. 'HR' as Capability Management 73
8. What can we realistically expect in managing human systems in organizations? 83
9. Summary of Applications 86
10. Appendix (Types of Work; IDM Program; Bibliography) 90

Human Sigma from an Adult- Developmental Perspective

Human Sigma from an Adult-Developmental Perspective

- **Human Sigma (Fleming & Asplund, 2007) is both an enterprise-wide initiative and a management philosophy.**
- **It embraces all human systems of an organization, with a focus on the 'employee-customer encounter' (a reciprocal relationship).**
- **It is also a measurement methodology focused on assessing engagement levels of both employees and customers in their interaction.**
- **Human Sigma is the first evidence-based human capital management approach focused on *process* rather than outcome.**
- **It penetrates to the core of human talent, knowing that talent develops over a long time, or is a *developmental* issue.**
- **This makes Human Sigma hospitable to integrating evidence regarding adult-developmental potential, both cognitive and social-emotional.**

Correspondence of Human Sigma and Developmental Thinking

- The key to Human Sigma is to make people aware of, and make them own, their developmental resources.
- The key to CDF is to give people feedback about their present level of social-emotional meaning making and cognitive sense making, as well as about their psychological balance at work.
- Both Human Sigma and CDF consider TALENT (‘developmental potential’) the core of personality. While talent is “most resistant to change,” it is also “unceasingly under development”.
- Integrating CDF with Human Sigma amounts to a deepening of a process-oriented management philosophy that is RIGHT for any business whose core is people.
- Automating CDF is presently a major topic at InterDevelopMental Associates, for the purpose of giving companies more global access to developmental assessment.

Developmental Hypothesis

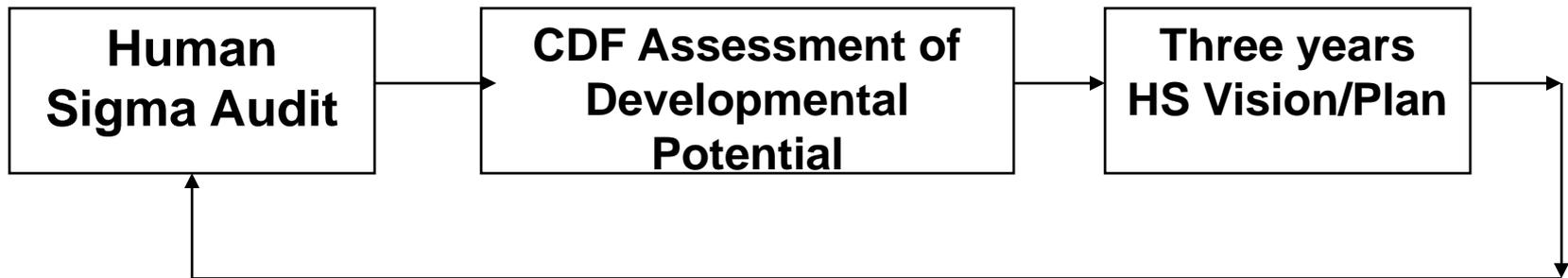
- **Human Sigma is a behavioral approach and therefore tends to see the root of business activity in behavior (especially emotional behavior) -- separate from adult development.**
- **However, research has established that ‘emotion’ is a result of the life-long social-emotional and cognitive development of adults.**
- **Also, the notion of ‘talent’ as a person’s “most reliable dispositions, the ones that best represent a person’s core personality” (Fleming et al., 266), is close to Elliott Jaques’s notion of potential capability (Jaques, 1994, Laske, 2008).**
- **Unsurprisingly, the ‘engagement levels’ Human Sigma assessments discern bear a close relationship with social-emotional levels of meaning making and phases of cognitive development.**
- **This link is explored in what follows.**

Employee-Customer Encounters

- If we understand *emotion* as a symptom of deeper, adult-developmentally grounded processes of mental growth over the life span, the employee-customer encounter takes on different colors.
- *Emotion* then appears as a way of engaging with work and fellow humans depending on the level of meaning making and phase of cognitive development a person has reached.
- As a result, processes of engagement with self and customers become open to scrutiny from an adult-developmental point of view.
- This viewpoint enriches the findings of Human Sigma's CE and Q12 survey instrument, by directing attention to ways in which, following evaluation, 'intervention' and 'encouragement' can be directed when moving into the future.
- A three-year window for strategizing that move forward is developmentally minimal and pragmatically optimal.

Integration Proposal

- After a Human Sigma Audit, the question ‘So what?’ arises, as it does after all assessments.
- The *Constructive-Developmental Framework (CDF)* assesses a person’s and team’s ‘vital signs’ in terms of level of social-emotional meaning making and cognitive sense making (see below). This is easily extended to teams and work groups.
- It seems optimal to integrate CDF into Human Sigma as a “navigational instrument” that permits to discern the *zones of greatest need for intervention and encouragement* following Q12 assessment of engagement levels.



Alignment of Performance Bands with Developmental Levels (Hypothesis)

- An interesting research hypothesis is that business units ranking high in terms of *performance band* are units in which a *majority* of contributors is social-emotionally and cognitively highly developed.

Human Sigma Performance Bands*	% of Business Units within Band*	CDF Social-Emotional Levels	% of Adults Reaching SE Levels	CDF Systems Thinking Index in % of Optimum **
HS6	1	4/5 – 5/4	< 10 %	83
HS5	14	4(3) – 4/5	20-25%	60
HS4	19	4/3 – 4(3)		38
HS3	29	3(4) – 4/3	55 %	12
HS2	32	2(3) – 3(4)		
HS1	5	2/3 – 2(3)	10%	

* Fleming & Asplund, 2007, 208

** No one-to-one alignment of social-emotional and cognitive scores exists. Rather, we are looking at *commensurable ranges* of scores. Therefore, the percentages indicate limit values.

CDF as a Navigational Instrument

- **CDF scores pinpoint present limits in the actualization of developmental potential – both emotional and cognitive – that hinder engagement of members of a business unit.**
- **In particular, CDF focuses on ‘requisite organization’, meaning the bringing into balance of individuals’ *Size of Person* and *Size of Role* (E. Jaques). CDF can answer the question: in a particular unit, *is the right person at the right place?***
- ***Posing this question helps formulating better questions and hypotheses as to where engagement issues exist, and what to do about them.***
- **Distinguishing, with Fleming & Asplund, between ‘transactional’ and ‘transformational’ activities, the most effective use of CDF would seem to lie in navigating the *terra incognita* as to where to intervene short-term – through training, coaching, mentoring, action learning, etc. – and how to reformulate human capital strategy long-term to improve performance level.**

Historical Background of Adult-Developmental Research

The ideas just sketched have their grounding in research on adult development . They show its relevance for achieving 'requisite organization' in which every employee is in the right place as a precondition of making optimal use of Human Sigma findings.

Decalage

- J. Piaget used this term to name a GAP – lack of correspondence – between a child’s age and its developmental level.
- Here, the ‘child’ is ‘HR’ – the way human resources in organizations are thought about.
- Today, we are dealing with a significant *decalage* between the foundations of present-day HR and the level of insight into **work capability** reached by the social sciences, especially the developmental sciences.
- Starting from Piaget’s research (1925-1980), the developmental sciences have made major strides in understanding work capability far beyond “competences,” “skills,” “personality,” and so forth.
- Let’s look at some of the research traditions which can help us revolutionize HR.

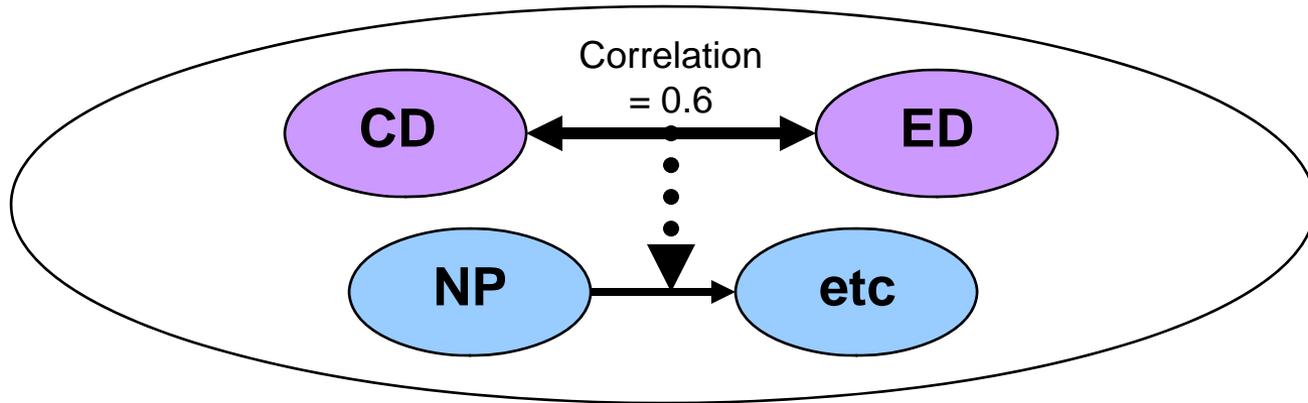
Milestones of Developmental Research

- **1925-1980: J. Piaget studies the cognitive development of children and adolescents.**
- **1955- 2003: E. Jaques presents theories of ‘human capability,’ of ‘work,’ and of ‘organizations’.**
- 1970: W. Perry investigates the relationship between two lines of human development, intellectual and social-emotional, in the college years.
- 1969-1984: L. Kohlberg studies the stages of ethical development from childhood to adulthood.
- 1976: J. Loevinger presents a theory of stages of ‘ego-development.’
- 1975-1984: M. Basseches studies the development of dialectical thinking in adolescents and adults.
- 1982: R. Kegan presents a theory of the ‘evolving self.’
- 1999: O. Laske studies the relationship between the two lines of adult development (social-emotional and cognitive) in executives.
- 2000: K. Wilber publishes a comprehensive summary of developmental theories in world cultures.

Where in Time (and Mental Space) is ‘HR’?

- The theoretical foundations of present-day HR in regard to notions of work capability are about 50 years behind the times.
- HR’s view of work capability is restricted to 1 out of 3 dimensions: *behavioral*. Developmental dimensions both in the sense of the *cognitive* and *social-emotional* development of adults are neglected.
- As a consequence, HR is focused on “applied capability” – present performance – and does not ‘see,’ or use tools for assessing, “potential capability”.
- However, HR can choose to re-orient to a broader concept of ‘work capability’.
- This requires new concepts, tools, language, and strategy formulations.

Anatomy of 'Work Capability'



Legend:



1. CD = cognitive development
2. ED = social-emotional development



3. NP = 'Need/Press', or *psychological profile* ("personality" snapshot)
4. Etc = what else people "have": expertises, skills, experience, "background" etc.

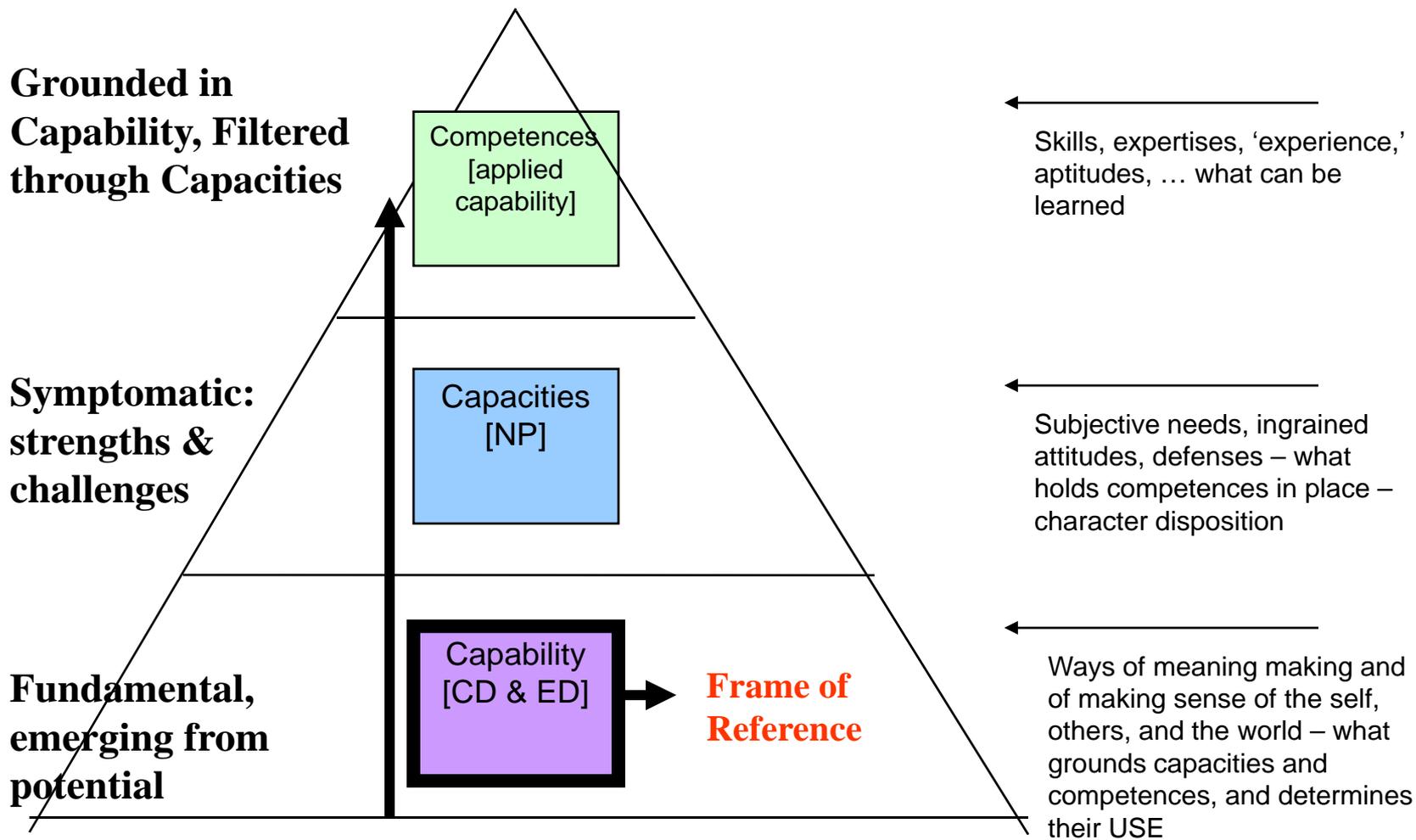
Adult-developmental



Behavioral

The 'Human Resources' Pyramid

From a developmental perspective



'Competences' are used as a function of Capability

Developmental Hypothesis

- Societies, constituencies, **organizations**, and the work force are stratified in terms of the levels of development that determine their meaning making and work capability.
- To know how to organize work, place people, and predict performance and policy outcomes, it greatly helps to ‘wear developmental lenses’.
- A research-based model for doing so is presented herein.

Organizational Case Study

Methodological Focus of the Case Study

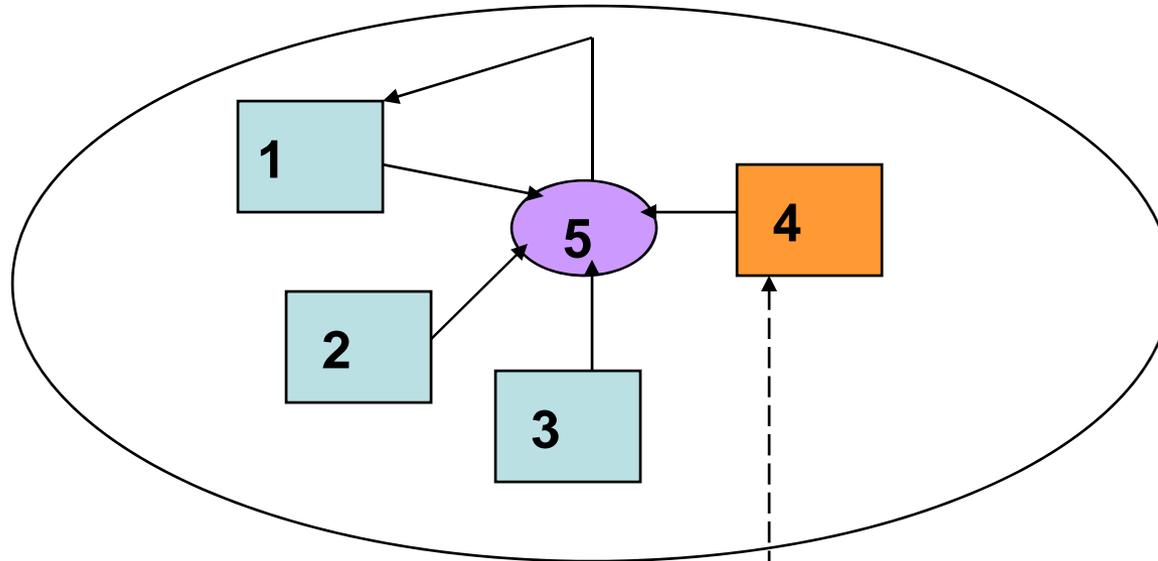
The Case Study that follows is based on an assessment of two dimensions of work capability explained throughout this presentation:

- applied capability (the capability that is presently applied)
- potential capability (the capability that could be applied currently or is emerging)

Potential capability comprises two subcomponents both of which 'develop' over the adult lifespan:

- social-emotional capability (ED for short)
- cognitive capability (CD for short)

Case Study – The Situation Addressed: Large Internet Banking Project



***Can our company succeed
as a partner in the Project
Consortium??***

Legend:

- 1 Bank
- 2 Internet specialist
- 3 Hardware specialist
- 4 Coding/Testing specialist
- 5 Supervision Team

The Case

- A large internet software specialist considers joining a Consortium of 4 companies that aim to build a large internet banking system.
- The company's Board of Directors wants to know whether the company presently has the capability to successfully join the Consortium over the next 3 years.
- The CEO, together with the HR Director, decides to use developmental tools to assess the capability of company management to successfully lead the company's contribution to the Consortium.
- The *Constructive-Developmental Framework* (CDF) is used to assess a representative sample of 20 middle managers working at a level of work complexity that is considered equivalent to project delivery requirements.

The Methodology Used: Constructive-Developmental Framework

- CDF assesses three main components of work capability (CD, ED, NP) and compares empirical outcomes to a **developmental managerial standard**.
- This standard depends on the “Stratum” (level of work complexity) that is required for optimal performance in a role.
- The assessment uses a ‘representative sample’ (subpopulation) statistically sufficient to yield valid outcomes.
- The assessment itself consists of 2 interviews (CD, ED) and a questionnaire (NP).
- The procedural steps in using CDF are shown next.

Steps in Applying CDF

1 Work Complexity Assessment

2 Human Capital Audit

3 Data Collection

4 Analysis & Scoring

5 Capability Assessment

6 Feedback & Strategic Summary

Succession
Planning

Recruiting High
Potentials

Developmental
Coaching

Team
Development

Corporate Risk
Management

Strategic
Capability
Planning

Capability Data Type

CDF uses a hybrid data type that comprises two complimentary aspects:

- **qualitative** measurements expressed in numerical form (used as short-hand for interpretation), from *interviews*

- **quantitative** measurements, from *questionnaires or surveys*.

The first form is used for measuring human intentional and cultural processes, the second for behavioral and organizational ‘snapshots.’

CDF Capability Data for an Individual

Social-Emotional Score (ED)	Cognitive Score (CD)	Behavioral Outcomes (NP)
<p style="text-align: center;">4(5) {3:7:3}</p> <p style="text-align: center;">↑ ↑</p> <p style="text-align: center;">Dev. Stage</p> <p style="text-align: center;">RCP = Risk- Clarity-Potential Index</p>	<p style="text-align: center;">C2 [48, 29, 10; 14 (%)]</p> <p style="text-align: center;">↑ ↑</p> <p style="text-align: center;">Type of Reasoning</p> <p style="text-align: center;">Degree of Systems Thinking</p>	<ul style="list-style-type: none"> •Success Factors •Challenges •Behavioral Conflicts •Energy Sinks •Frustration •Effectiveness Index •Variables centrally relevant to the Coaching Plan

The data shown consists of qualitative information quantified by way of a numerical ‘shorthand.’

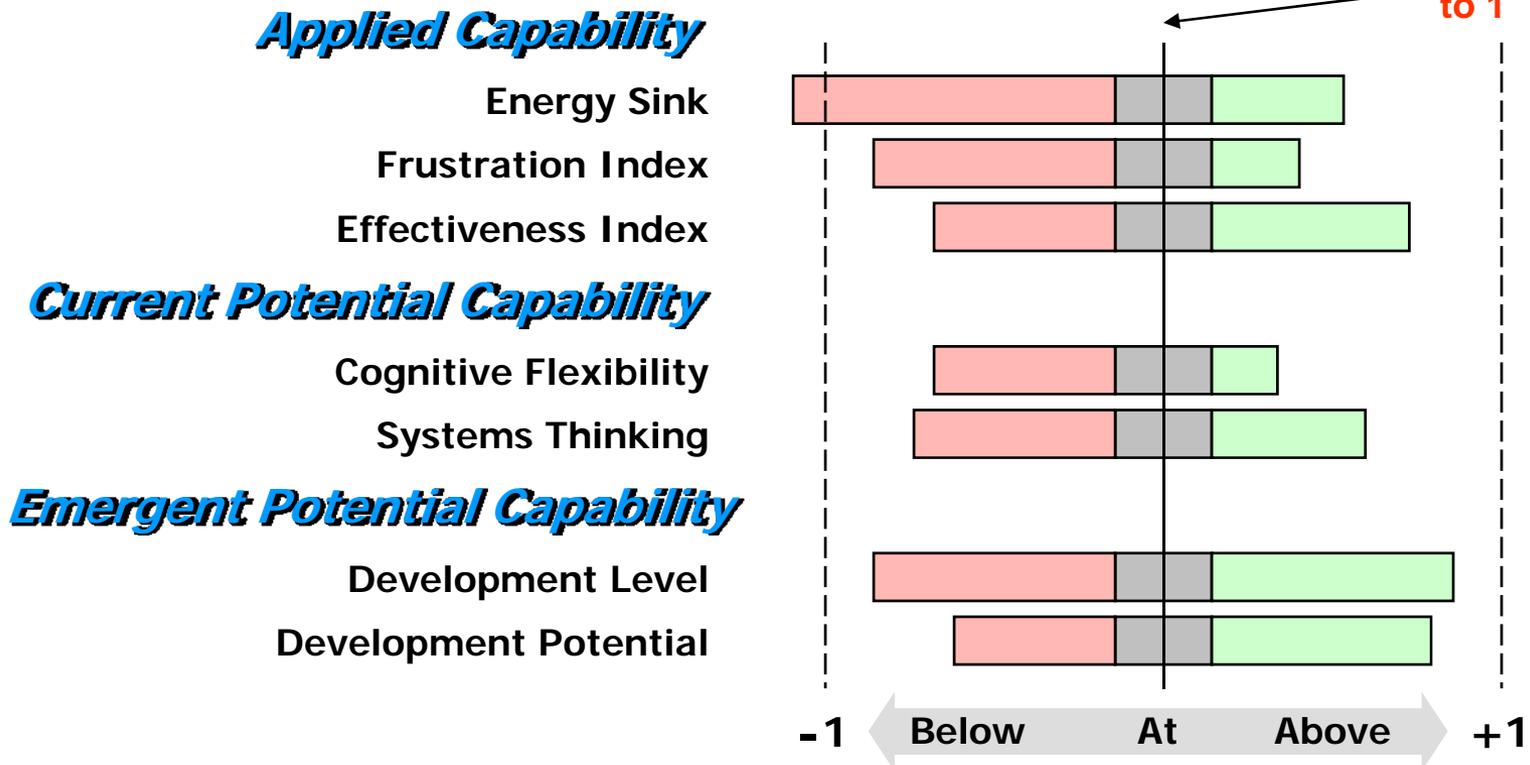
The data needs to be interpreted by a developmental expert to be used ethically and correctly; it is based on confidential information.

Aggregation of Individual Data

- We can aggregate individual data points to form ‘big picture’ assemblies of such points.
- The assessment outcomes for the 20 members of the company’s representative sample can then be shown in the form of a **Capability Metric**.
- The metric summarizes individual data sets in reference to a stipulated *level of requisite accountability* (here Stage 4)
- The metric combines all outcomes under three rubrics:
 - **applied capability (present performance in terms of psychological profile)**
 - **current potential capability (a cognitive measure; CD)**
 - **emergent potential capability (a social-emotional measure; ED)**

Capability Outcomes for a Middle Management Representative Sample (Size = 20)

Group Profile (at a specific level of accountability)



Each bar represents the cumulative sample data for that particular Level variable.

Gray = meets capability requirements (optimal engagement, RO)

Red = below capability requirements (performance risk)

Green = exceeds capability requirements (wasted potential capability)

Dimensions of a Capability Metric

Dimension of Capability Metric

Behavioral Correlates

Applied Capability:	
1. Energy sink	Gaps between individual's subjective need for integrity & safety, and organizational pressure (culture)
2. Frustration index	Gaps between professional aspirations and individual's perception of organizational climate ("frustration")
3. Effectiveness index	Effectiveness on the job at a particular accountability level, in light of (1) and (2) above
Current Potential Capability:	
4. Systems thinking	Ability to form a balanced, systemic picture of what is going on, seeing persons, events, situations as elements of a process
5. Cognitive flexibility	Ability to take multiple perspectives, by balancing attention to the present with attention to long-term context and history
Future Potential Capability:	
6. Developmental level	Positioning of self in relation to others; degree of self-centeredness of value system and emotional reactions
7. Developmental potential	Potential for further mental growth; ability for leadership; ability to take responsibility for own situation and decisions

What the Capability Metric Shows

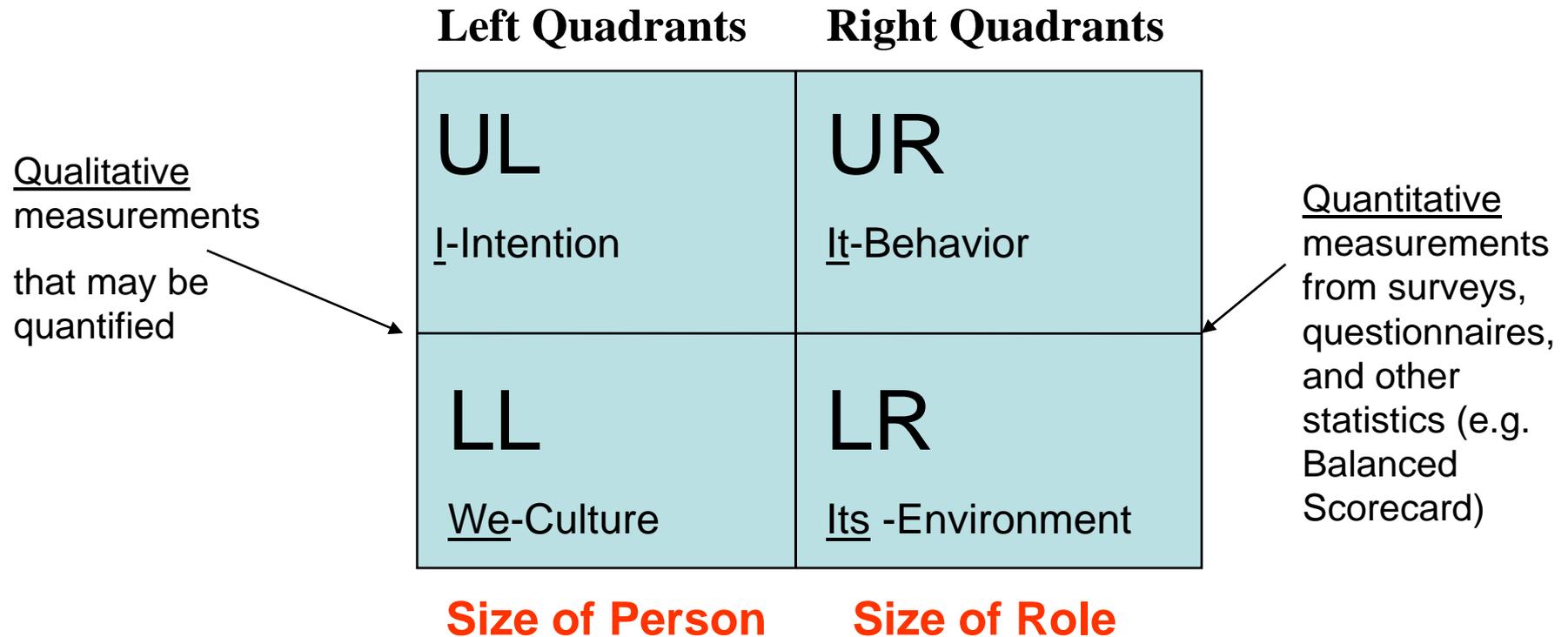
- There is overall more **performance risk** than **excess capability** – 35% of the group assessed lacked requisite capability (set at ED level 4, self authoring) for work in the Consortium.
- 15% of capability is being wasted due to assignment of work to individuals with a higher potential than is required for their present level of accountability (misplacement).
- There is considerable, presently unused, developmental potential especially in the *social-emotional* (rather than the cognitive) capability dimension.
- On the behavioral side (applied capability), there are large *Energy Sinks* between individuals' subjective need and their organizational aspirations (which are 'out of synch').
- Corporate culture is responsible for a rather high *Frustration Index*.
- The resulting *Effectiveness Index* of the assessed managerial group is thus lower than could be the case if the existing potential were recognized and used by the company.

Recommendations Derived from the Assessment

- Partial job-reassignment for subgroup “in the green,” to tasks commensurate with their current and emergent capability.
- Partial job-reassignment for subgroup “in the red,” to tasks more highly commensurate with their capability.
- Introduction of a **developmental coaching program** aimed at supporting members of the subgroup “in the red.”
- Assignment of primary Consortium duties to personnel “in the gray” shown to be ‘in synch’ with their assigned level of work complexity.
- Staffing of “coding” and “testing” subgroup leadership with “gray” individuals, to guarantee smooth functioning of Consortium activities.
- Some new hiring of personnel at the requisite developmental level subsequent to a CDF assessment, especially in the crucial testing phase of the project.
- **Reassessment** after 1.5 years against the pre-test baseline.

Matching Two Organizational Architectures

Left and Right Quadrants



Legend: UL = upper left; LL = lower left; UR = upper right; LR = lower right

The Four Quadrants Constitute a Map, Not the Territory

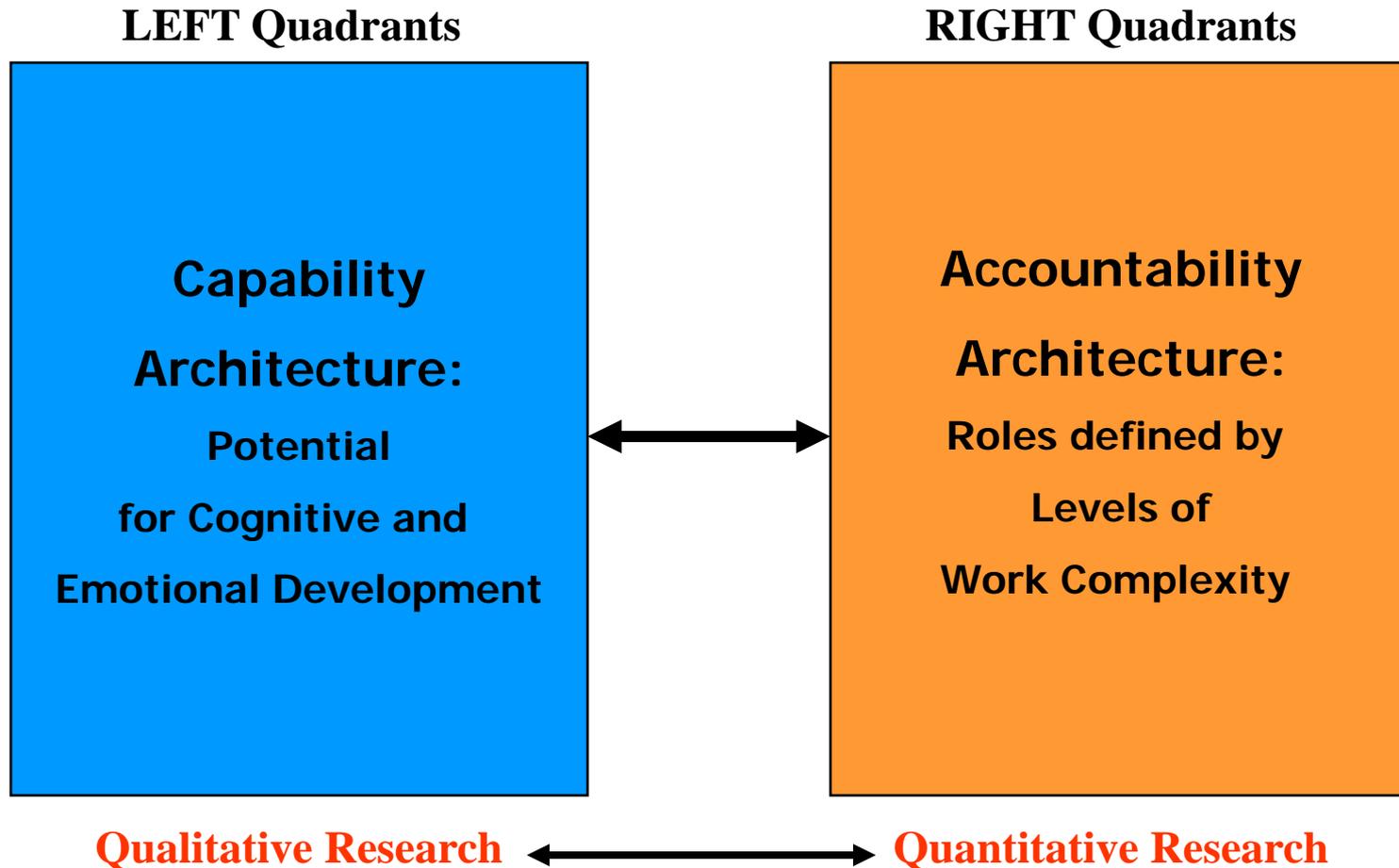
- The LEFT quadrants define 'Size of Person;' they represent internal worlds of intention and culture – internal processes -- that can be measured by qualitative methods, and aggregated quantitatively.
- The RIGHT quadrants define 'Size of Role;' they represent what can be quantitatively measured – external processes -- either individually (It) or organizationally (Its).

We can **measure** the left quadrants by using developmental assessments, and the right quadrants by using behavioral assessments.

‘Organization’ Re-Defined

- **DEFINITION:** Organizations and bureaucracies are institutionalizations of orders of information complexity matched to levels of individual work capability.
- **Orders of information complexity** structure organizational echelons or ‘strata,’ defining levels of accountability.
- **Levels of individual capability** determine how WORK gets done on these strata, thus the extent to which accountability is realized.

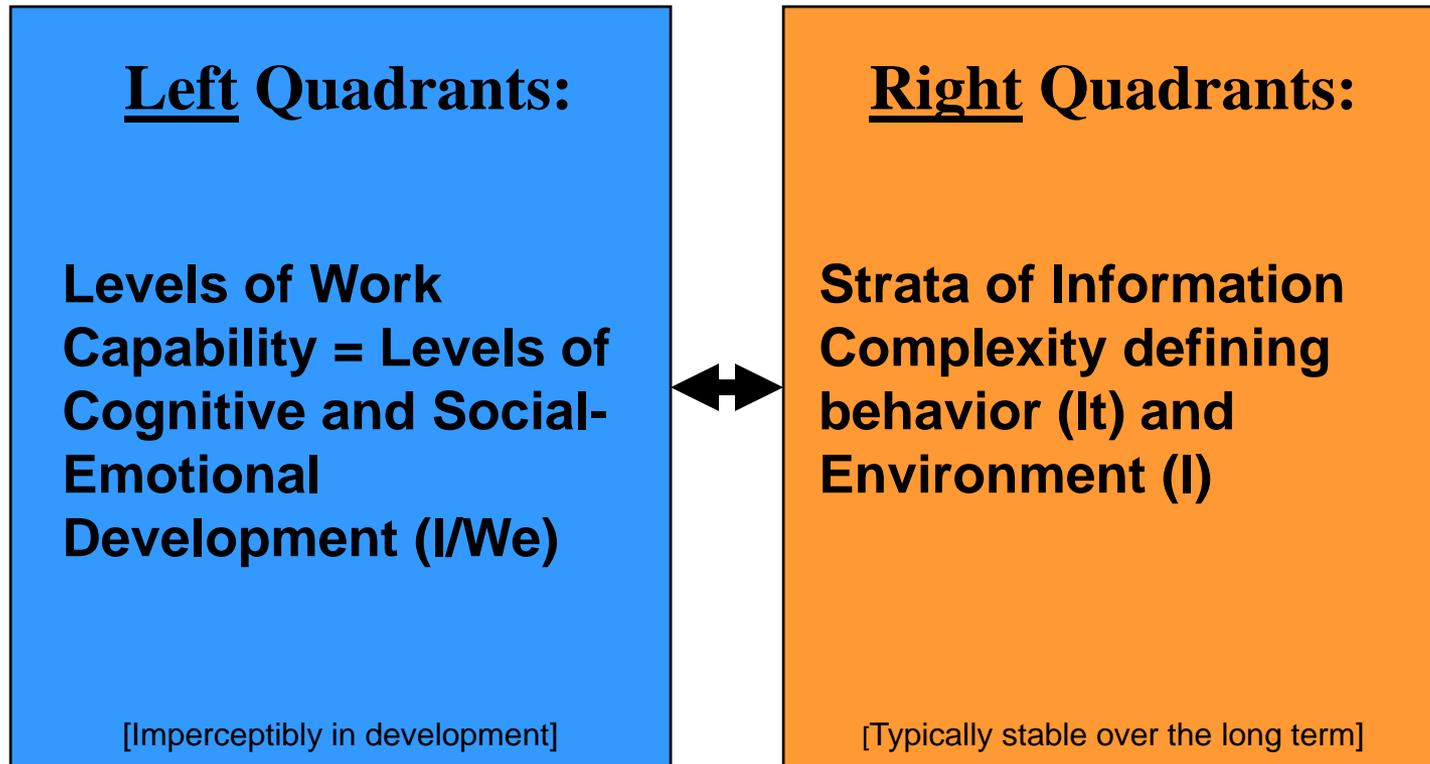
Requisitely Organized Companies Match Two Architectures



The Two Architectures Can Be Measured

Capability Architecture

Accountability Architecture



Left Quadrants:

Right Quadrants:

**Levels of Work
Capability = Levels of
Cognitive and Social-
Emotional
Development (I/We)**

**Strata of Information
Complexity defining
behavior (It) and
Environment (I)**

[Imperceptibly in development]

[Typically stable over the long term]

Meaning and Sense Making

**Behavior, Action, Decision
Making, Management**

The Goal is Requisite Organization (RO)

- **Requisite organization** (Jaques, 1989 f.) consists of a balance between levels of individual capability (left quadrants) and strata of information complexity (right quadrants) -- marrying people (I/We) and Work (It/Its).
- To achieve RO, we need to operationalize the quadrants using developmental tools.
- We operationalize:
 - the **left quadrants** in terms of levels of cognitive (CD) and social-emotional development (ED)
 - the **right quadrants** in terms of a behavioral factor analysis, e.g., 'Need/Press' (NP), that takes snapshots of how professional competences are presently used individually and collectively, and what stands in the way of using them optimally.

Providing Instrumentation for the Two Architectures

**Capability Architecture:
CD & ED**

**Accountability Architecture:
NP [or equivalent]**

LEFT Quadrants:

**Work Capability
comprises three
main components:
CD, ED, and NP
(behavioral)**

[Imperceptibly in development]

RIGHT Quadrants:

**Strata can be
defined in terms of
levels of cognitive
development [CD]**

[Typically stable over the long term]



Redefining Human Resources

From a developmental point of view, Human Capital has three Dimensions:

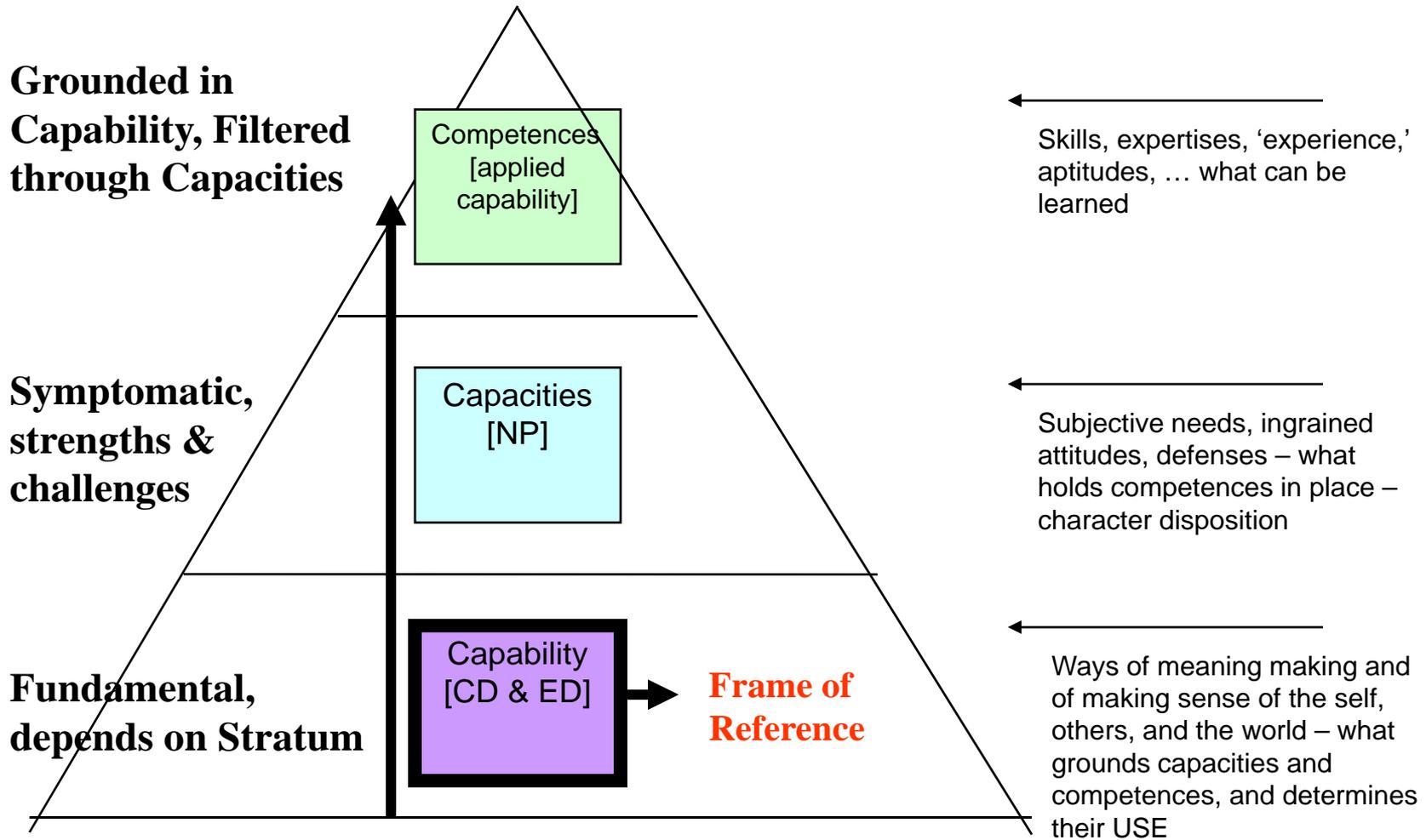
- social emotional
- cognitive
- behavioral (including ‘competences’).

The first two define Capability, the third, Capacity.

Use of competences depends upon these two.

The 'Human Resources' Pyramid

From a developmental perspective



'Competences' are used as a function of Capability

HR is about Matching Size of Person to Size of Role

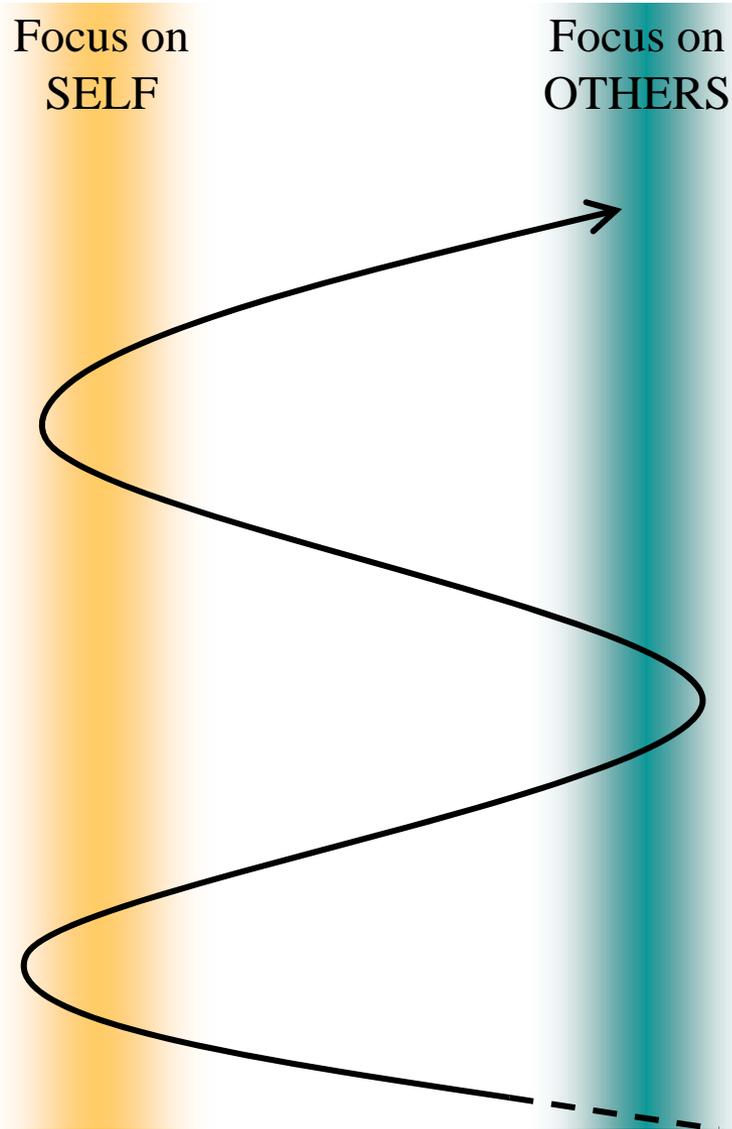
**Size of Person expands developmentally;
Size of Role does not, but can be viewed
developmentally.**

**SIZE OF PERSON is defined in terms of
Capability (CD, ED), and Capacity (NP).
Competences are grounded in CD, ED, NP.**

**SIZE OF ROLE is defined in terms of
organizational strata, thus levels of cognitive
development institutionalized.**

Description of Developmental Levels

Capability Levels

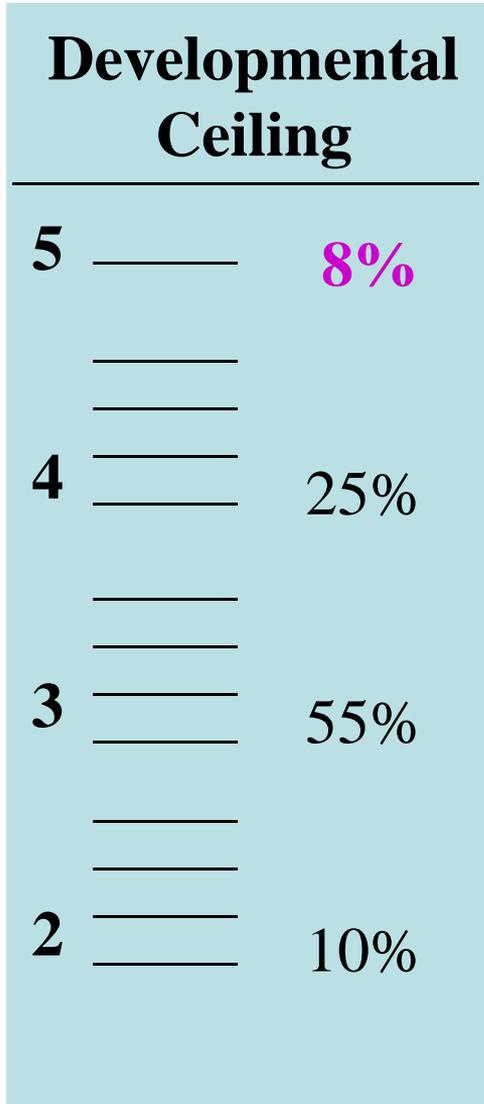


Level is NOT well predicted by education or age!

- ← Toward Stage 5
- ← Stage 4 (ca. 40 years)
- ← Stage 3 (ca. 25 years)
- ← Stage 2 (ca. 15 years)

* R. Kegan, 1982

Statistics of Adult Developmental Attainment in Evolved Societies



To the left are 4 main levels, each comprising 4 intermediate levels. These sublevels indicate degrees of advancing toward the next following level. As the percentages on the right indicate, most individuals remain on level 3, while 25% of individuals reach level 4, and 8% reach level 5. The names of the levels are meant to indicate a crucial feature of each of the levels of social-emotional potential.

Capability Levels Detailed

Cognitive Capability Situates Social-Emotional Capability

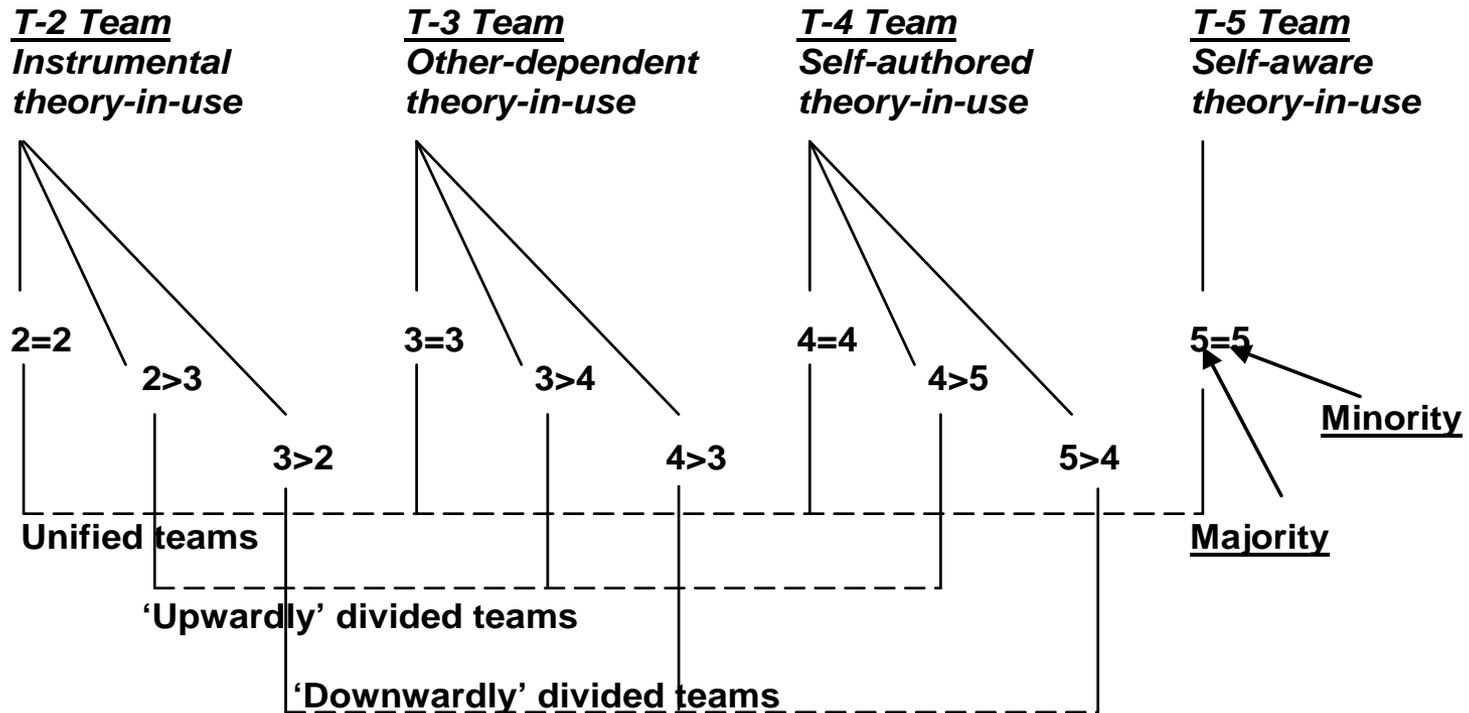
Phase of Development of Dialectical Thinking (Basseches) [CD]	Stage of Reflective Judgment (King & Kitchener) [CD]	Strata [CD] <i>Institutionalized Levels of Cognitive Development</i>	Type of Logical Reasoning (Jaques, Laske) [CD]	Cognitive Fluidity Index (Basseches, Laske) [CD]	Social-Emotional Stage (Laske, Kegan) [ED]
Phase 4	Stage 7	VIII	C4	>50	5(4)
		VII	C3		5/4
Phase 3	Stage 6	VI	C2	<50	4/5
		V	C1		4(5)-4
Phase 2	Stage 5	IV	B4	<30	4(3) – 4/3
		III	B3		3(4) – 3/4
Phase 1	Stage 4	II	B2	<10	3
		I	B1		2/3 - 3(2)

Equivalent cognitive measures

Intermediate Stages

Post-bureaucratic boundary

Social-Emotional Team Typology



Most teams are developmentally divided rather than unified. In a “downwardly divided” team, the majority resides at the higher, a minority at a lower level, and vice versa for “upwardly divided teams.”

Organizational Strata

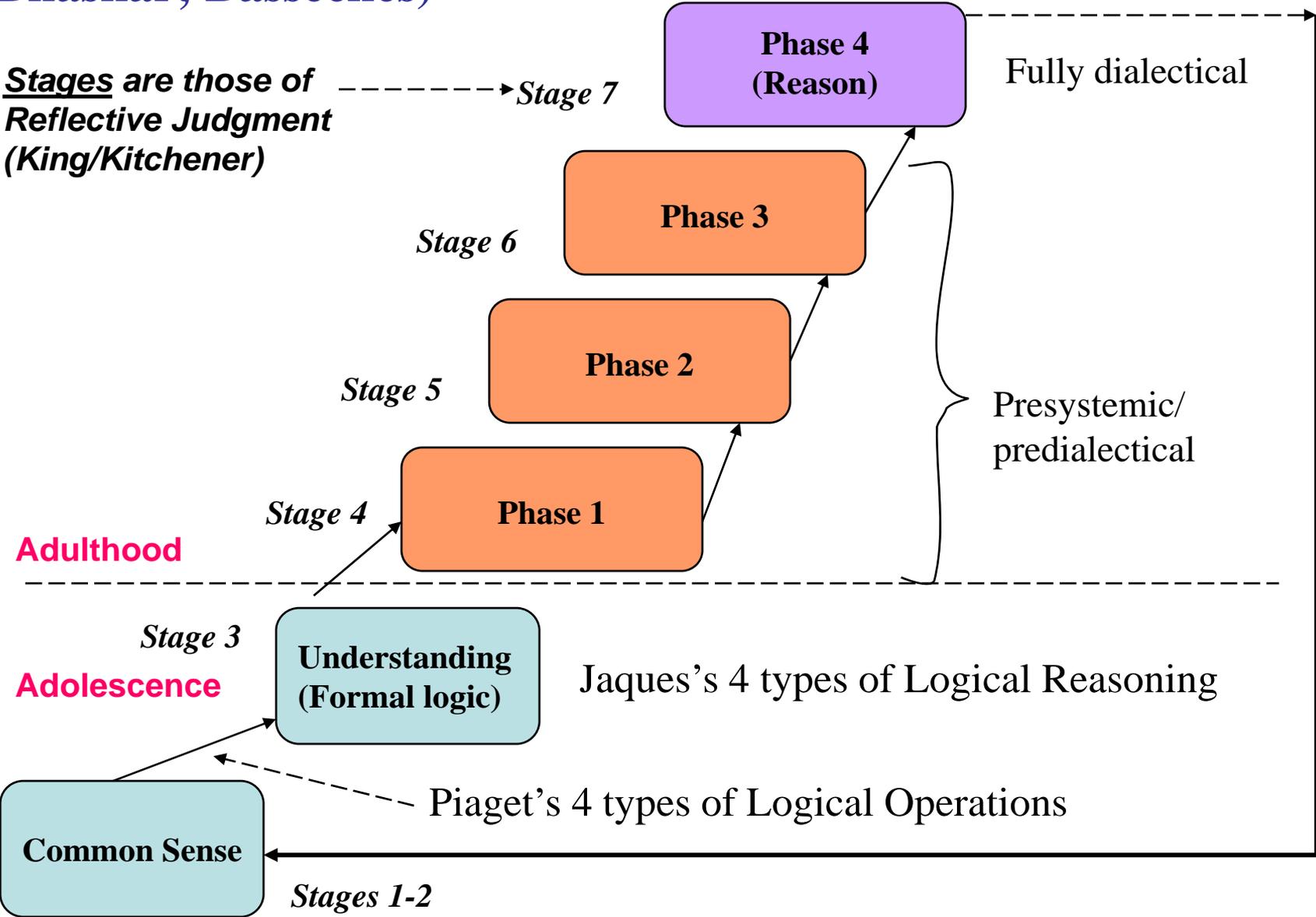
Strata are **levels of professional accountability** defined by level of information complexity (ethical standards are implied).

- The higher the complexity of work at a Stratum, the longer is the **time horizon** needed for work at the Stratum, and the greater is the level of information complexity that can be dealt with.
- Following Jaques, we can define Strata in terms of four types of logical reasoning (“or,” “and,” “if,” “iff”).
- This approach can be refined by introducing higher-level cognitive development in terms of *phases of systemic and reflective thinking*.
- Taking our cue from Jaques’s theory of logical reasoning, we can distinguish eight successively more complex strata.
- **People move through the strata based on their growing ability to think systemically and “dialectically”.**

Phases of Cognitive Development

(Bhaskar; Basseches)

Stages are those of Reflective Judgment (King/Kitchener)



Strata Detailed

Organizational Stratum (Jaques)	Role Description (Jaques)	Type of Logical Reasoning (Jaques, Laske)*	Associated Time Horizon (Jaques) [years, months, days]
VIII	Board Member	C4	50 y
VII	CEO	C3	25 y
VI	EVP	C2	10-20 y
V	VP	C1	5-10 y
IV	General manager	B4	2-5 y
III	Unit manager	B3	1-2 y
II	First line manager	B2	3 mo/1 y
I	Operator, Staff	B1	1 day/3 mo

* Types 1 -4 indicate disjunctive (or), conjunctive (and), conditional (if) and bi-conditional reasoning (iff) which repeat over two orders of information complexity (B & C) dependent on time horizon. 49

Cognitive Typology of Work Complexity Levels

Phase of Development of Dialectical Thinking (Basseches)	Cognitive Fluidity Index of Individuals and Teams (Basseches, Laske)	Stage of Reflective Judgment (King & Kitchener)	<u>Organizational Strata</u> [Levels of Work Complexity] (Jaques)	<u>Cognitive Type of Work</u> Delivered by Individual or Team
Phase 4	>50	Stage 7	VIII	C4
			VII	C3
Phase 3	<50	Stage 6	VI	C2
			V	C1
Phase 2	<30	Stage 5	IV	B4
			III	B3
Phase 1	<10	Stage 4	II	B2
			I	B1

Illustrations and Descriptions of Developmental Levels

Cognitive Levels (Strata)

Manager A (Stratum II)

Managers A to C, below, all speak about issues arising from an organizational acquisition/merger that has recently occurred, but do so at different levels of cognitive development.

“When we bought Acme’s service business, it was clear that if we didn’t build efficiency into the combined network, we’d fail. Efficiency means reduced overall costs, more revenue from our customer base, and less work overlap. Now we can price our products more competitively, knowing we can continue to build our revenue stream through service contracts. And providing that service will keep us close to our customers for equipment lifecycle planning and utilization analyses. If we can keep our eyes focused on managing costs and delivering quality, the results will be there.”

Manager B (Stratum IV)

“When we bought Acme’s service business, it was clear that one of the immediate advantages would be in building a more efficient network. By integrating product and service sales, we become a more complete operation, and customers will see us in a new light. However, we also become more vulnerable to a lack of integration until we can define that new business model, and manage re-training and re-directing our sales force. Even then, perhaps customers may feel we’re not as focused on our huge new service operation as was Acme. And Engineering is committed to reducing maintenance and Manufacturing to driving up quality; that may mean we’ll have to branch out to include servicing competitors’ products to justify the new service infrastructure and manage the overhead. Would customers see that as a dilution of our commitment to our own products? We’re juggling many more things than before, and risk over-extending ourselves. How we balance customer perceptions, cost efficiencies, and product development will be a challenge, but we can succeed if we plan carefully and give it our best shot.”

Manager C (Stratum V or VI)

“Once we decided to buy Acme’s service business, we knew that there were a lot of ramifications to consider that could only incompletely be foreseen right away. We knew that in many ways we had considerably complicated not only our in-house way of working, but also the market environment in which we would have to function. While on the one hand, we were clearly striving to become a more complete operation, we had previously been on safer ground since our business model had been thoroughly tested and validated, and we had a reasonably clear view of who our customers were and what they expected of us. But once we integrated Acme’s service business, we had to rethink almost everything we had learned to take more or less for granted. There were questions of attunement of our workers to the company’s new mission, but also of customers to the broader agenda we now came to be identified with. We were also introducing new goals for our internal business process, and put in jeopardy the balance of the parts of our operation which had already been quite complex when focusing on product sales alone. So, there now was a multiplicity of contexts to consider that were only partly known to us initially. Essentially, the effect of this was that we became much more sensitive to relationships, not only between parts of our operation, but to relationships between product and services, work force and customers, business process and financial process, not to speak of systemic interactions that tested the limits of stability and harmony of our operations. We now had to coordinate a larger number of subsystems, and these subsystems tended to transform in a way that was not initially foreseen or even foreseeable. As a result, we felt we would lose out if we did not succeed in developing multiple perspectives on almost every aspect of our organization.”

Stages of Social-Emotional Development

Changing Orientations Across Adult Stages

Orientation	L- 2 [10%]*	L-3 [55%]	L-4 [25%]	L-5 [10%]
<i>View of Others</i>	Instruments of own need gratification	Needed to contribute to own self image	Collaborator, delegate, peer	Contributors to own integrity and balance
<i>Level of Self Insight</i>	Low	Moderate	High	Very High
<i>Values</i>	Law of Jungle	Community	Self-determined	Humanity
<i>Needs</i>	Overriding all others' needs	Subordinate to community, work group	Flowing from striving for integrity	Viewed in connection with own obligations and limitations
<i>Need to Control</i>	Very High	Moderate	Low	Very low
<i>Communication</i>	Unilateral	Exchange 1:1	Dialogue	True Communication
Organizational Orientation	Careerist	Good Citizen	Manager	System's Leader

The Level-2 ‘Instrumentalist’ Culture

Orientation	L-2 [10%]
<i>View of Others</i>	Instruments of own need gratification
<i>Level of Self Insight</i>	Low
<i>Values</i>	Law of Jungle
<i>Needs</i>	Overriding all others’ needs
<i>Need to Control</i>	Very high
<i>Communication</i>	Unilateral
<i>Organizational Orientation</i>	Careerist

Individuals of this culture define themselves by their own immediate wants and needs. They are focused on preserving their self image regardless of its accuracy, and reject any feedback that is at odds with their own rigid self perception. They will follow convention if it is to their advantage but will take recourse to deception when convinced they are safe to do so. In a position of power, they will micromanage and manipulate others to their own advantage, and show unbridled careerism.

The Level-3 ‘Other-Dependent’ Culture

Orientation	L-3 [55%]
<i>View of Others</i>	Needed to contribute to own self image
<i>Level of Self Insight</i>	Moderate
<i>Values</i>	Community
<i>Needs</i>	Subordinate to community, work group
<i>Need to Control</i>	Moderate
<i>Communication</i>	Exchange 1:1
<i>Organizational Orientation</i>	Good Citizen

Individuals of this culture define themselves based on expectations of external and/or internalized Others. They find it difficult to know where they end and others begin. They are NOT acting from their own value system since unable to disentangle themselves from *inter-nalized others* (conventions), and therefore don't make good change agents, but rather followers. Individuals of this culture constitute the majority of bureaucracies, and need a “boss” to guide and supervise them. They fit into any existing culture like a hand into a glove.

The Level-4 ‘Self-Authoring’ Culture

Orientation	L-4 [25%]
<i>View of Others</i>	Collaborator, delegate, peer
<i>Level of Self Insight</i>	High
<i>Values</i>	Self-determined
<i>Needs</i>	Flowing from striving for integrity
<i>Need to Control</i>	Low
<i>Communication</i>	Dialogue
<i>Organizational Orientation</i>	Manager

Individuals of this culture are defined by their own value system and ‘integrity.’ They can manage themselves, and therefore others. However, they have difficulty standing away from their idiosyncratic life- and career history in a critical way, and may be defensive when asked to do so. As change agents, they will try to impose their own value system on others for the better of the community, and may find it challenging to go beyond merely respecting others.

The Level-5 ‘Self Aware’ Culture

Orientation	L-5 [10%]
<i>View of Others</i>	Contributors to own integrity and balance
<i>Level of Self Insight</i>	Very High
<i>Values</i>	Humanity
<i>Needs</i>	Viewed in connection with own obligations and limitations
<i>Need to Control</i>	Very low
<i>Communication</i>	True Communication
<i>Organizational Orientation</i>	System’s Leader

Individuals of this culture are of a ‘post-bureaucratic’ mindset, in that they are treating others as midwives of their own development, thereby modeling ongoing learning, self-inquiry, and risking critical self-exposure. Whatever their expertise, they are no longer attached to any particular aspect of the self, and are focused on ‘being in the flow’ where anything may happen. They are attuned to unceasing change and openly share their apprehensions, insights, and doubts for the good of everybody they work with.

Varieties of Behavior

Behaviors are essentially a *pre-adult* legacy,
changeable only within limits.

They express current, not potential, capability.

They are symptoms that need to be explained.

Behaviors are a 'filter' on Capabilities.

One and the same behavior looks and feels different
at different developmental levels.

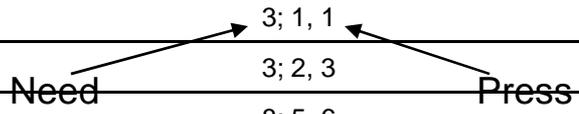
What is 'Behavior'?

In Capability Metric addressed as 'Capacity'

- Behaviors are exhibited based on current capability, and are thus symptoms of underlying potential capability.
- In the methodology here presented, 'behavior' is seen as a manifestation of developmental profile, under two aspects, of:
 - psychogenic need (NEED)
 - internal (ideal) and organizational (external) pressure (PRESS).
- **We speak of 'Need/Press Profile' (NP): the (im-) balance of largely unconscious subjective needs and the pressures that stand against satisfying them.**

Example Behavior Profile (NP)

Variable	Need; Ideal Press, Actual Press
Self Conduct	
1	3; 1, 1
2	3; 2, 3
3	8; 5, 6
4	7; 2, 3
5	4; 4, 2
6	3; 0, 1
Approach to Tasks	
7	6; 1, 0
8	6; 6, 6
9	9; 8, 9
10	6; 7, 8
11	1; 2, 4
12	4; 7, 4
Emotional Intelligence	
13	6; 7, 8
14	4; 6, 5
15	6; 7, 8
16	9; 9, 8
17	6; 7, 6
18	2; 2, 1



**‘Need’ = subjective need,
‘Press’ = super-ego (ideal)
and environmental
pressure (actual)**

Profile Details

Energy sink	Gap between Need & Aspirations (ideal press)
Frustration	Gap between ideal & actual Press (org. experience)
Attunement to Organization	Gap with Managerial Aspirations
Distortion of Corporate Culture	Gap with how managers experience the organization
Overall Effectiveness	Effectiveness Index

E.S. F.I.

A diagram showing two arrows pointing towards the values '2; 2, 1' in row 18 of the table. The arrow from the left is labeled 'E.S.' and the arrow from the right is labeled 'F.I.'

(Action) Learning and Coaching

What about Learning?

Learning is often mistaken for (adult) development but is actually based on, and limited by, present level of development.

You wouldn't expect a six-year old to learn calculus.

‘Learning’ is NOT ‘Development’

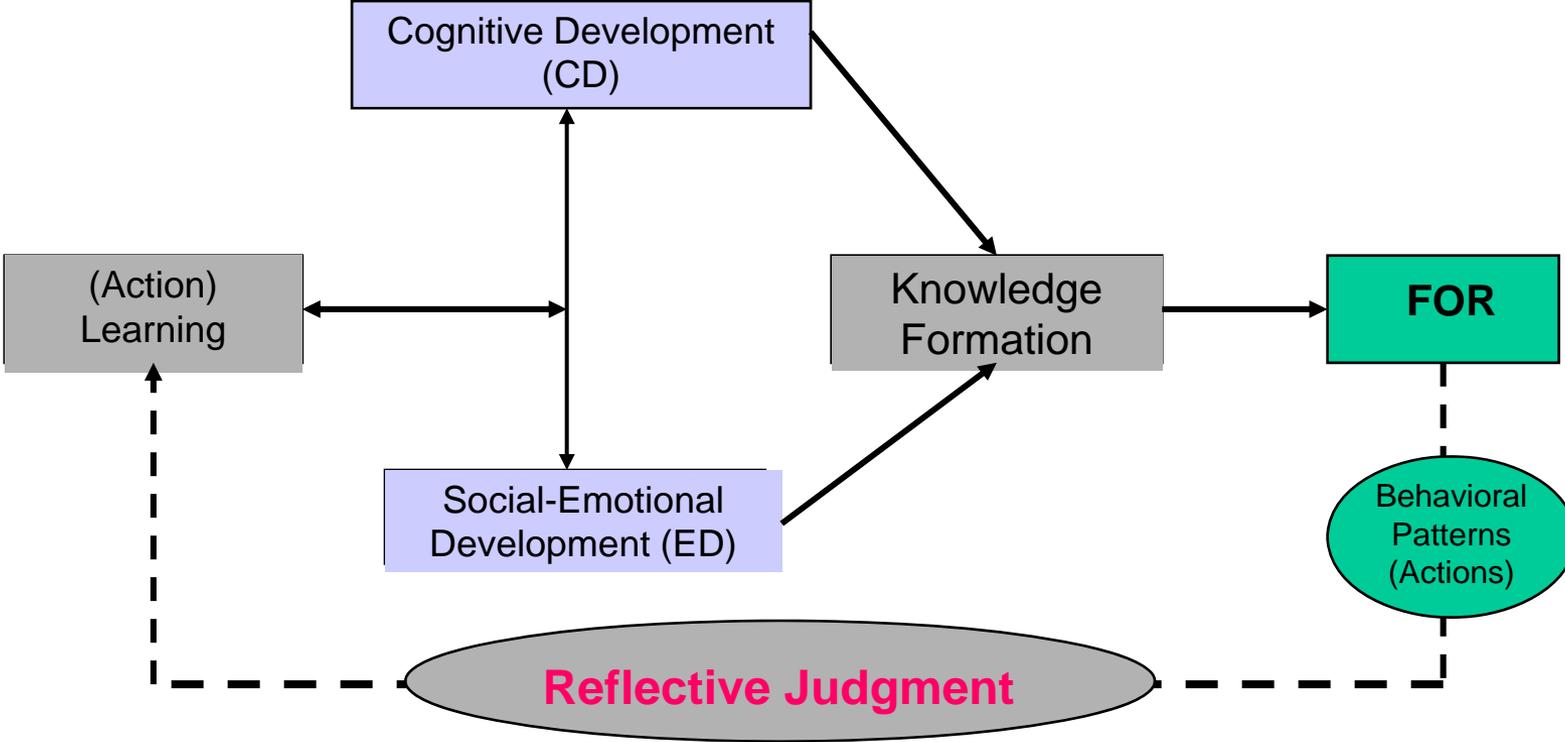
- Learning is knowledge formation.
- It is potentially a change of behavior **in time**, while development is a longitudinal movement **across time**.
- It takes adult-developmental resources to learn; where these are lacking, learning will not take place, and/or will be ephemeral.
- Learning per se *rarely* (and then only partially) translates into developmental shifts.
- Most learning leads to knowledge formation within the present bounds of the learner’s developmental range.

Your ‘Learning Department’ should be called ‘Department for Adult Development’

Learning Leads to ‘Knowledge Formation’

- Under the influence of adult development, ‘learning’ and ‘action learning’ lead to knowledge formation.
- Knowledge formation, in turn, generates a Frame of Reference (FOR) based on which people interpret what they experience, and plan what they intend to do.
- HR activities should aim for changing FOR (not imparting ‘skills’ and ‘expertises’).
- Where FOR is not changed, there is ‘business as usual’ because ‘expertises’ cannot be optimally used.

Learning (and Use of Competences) is a Function of FOR



Legend: FOR=Frame of Reference

What about Coaching?

- What holds for learning, also holds for coaching.
- While coaching can promote ‘learning’ and ‘change,’ it can support a developmental shift only where resources for such a shift exist in a person (or team) coached.
- It is thus important to assess the potential, not the current, capability of coachees.
- I have previously discussed the social-emotional, cognitive, and behavioral criteria based on which developmental coaching occurs, stressing that these criteria need to be considered in parallel.
- “Tell me how you presently make meaning (ED), and how systemic you are thinking (CD), and I – as a developmental coach -- will calibrate your present potential capability to give feedback to you.”

Developmental Coaching

- Developmental assessment is the basis of **evidence based** developmental coaching.
- In this kind of coaching, assessment outcomes form the basis of formulating *coaching plans*, and pre- and post-tests are used to determine *coaching effectiveness*.
- For the developmental coach, *coaching ethics* includes knowing one's own developmental level since one cannot coach a more highly developed client without doing harm.
- Developmental coaching instruction involves learning the CD, ED, and NP assessments, and being able to synthesize three different data sets, initially through a case study.
- Developmental Coaching Programs are now emerging, and will change the landscape of coaching.

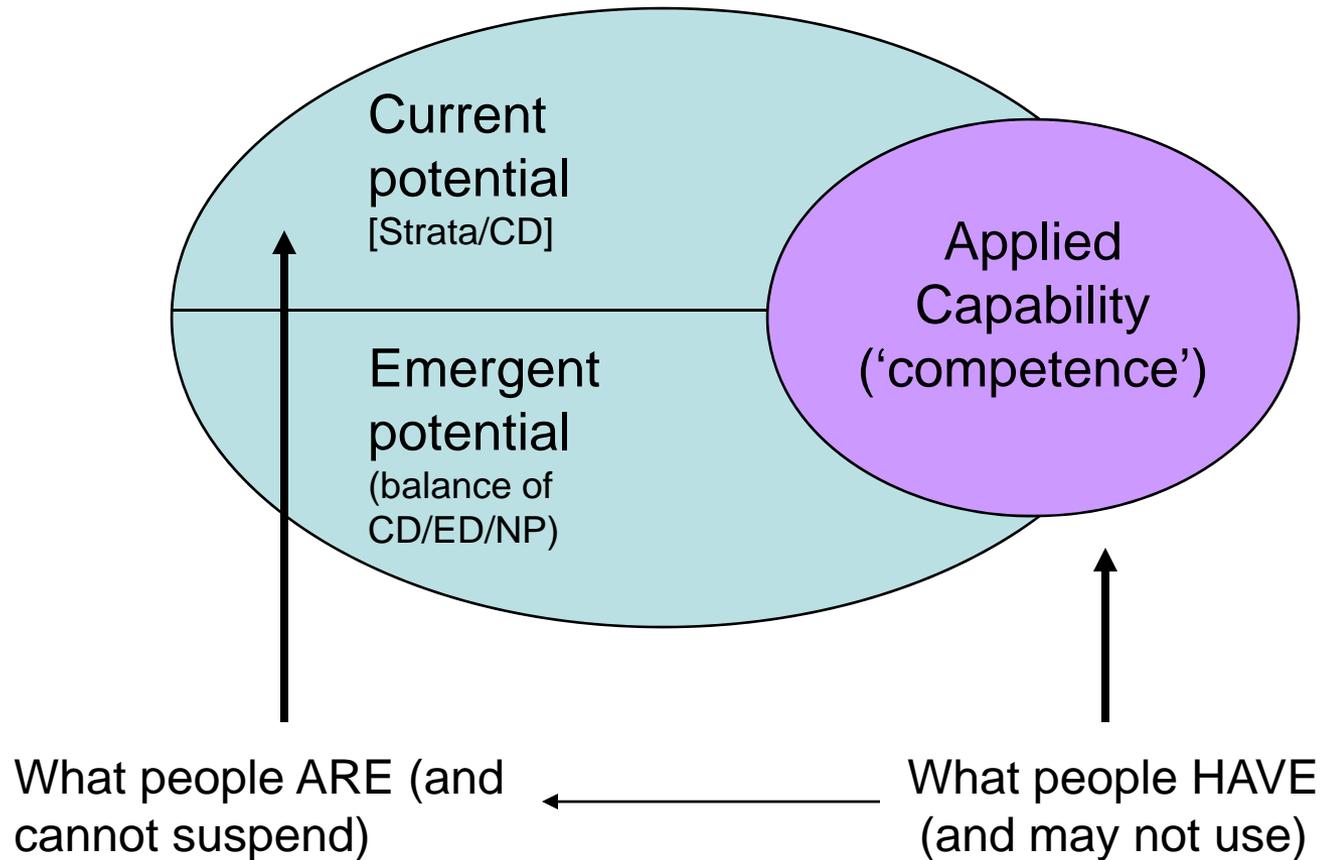
‘HR’ as Capability Managment

The Future of ‘HR’

- The HR function is presently *underutilized in strategy making* because its promise to help companies, and organizations generally, focus attention on the *developmental potential of the workforce* is unfulfilled.
- All striving for “having a seat at the strategy table” cannot be successful until HR recognizes its own capability “to look into the future of the workforce,” instead of only taking snapshots of workforce capability here and now (e.g., by ‘surveys’).
- To achieve its potential, HR will have to:
 - embrace its cognitive science and developmental foundations, rather than focusing attention on ‘behavior’, ‘performance,’ and ‘competence’ alone;
 - “walk the talk” about *high potentials*, by actually learning and using developmental assessments.

FOCUS ON POTENTIAL

for the sake of requisite organization



HR’s main function is to match size of person to size of role.
Person is defined by potential, not applied, capability.

Elliott Jaques Pioneered HR as ‘Capability Management’

- Elliott Jaques (1917-2003) is the originator of “HR” as a discipline of Capability Management.
- Jaques defined three aspects of workforce capability, **dismissing the first as an effective way of strategizing the use of human capital:**
 - applied capability (CAC)
 - current potential capability
 - emergent (‘future’) potential capability.
- Of these, HR is restricted to the first, (presently) applied, capability.
- His definitions are noteworthy.

Current Applied Capability

“Current Applied Capability (CAC) for any particular type of work is a function of level of mental complexity (CMP), degree of interest (Value) in that work, possession of the necessary experience and skilled knowledge specific to that work (K/S), and any dysfunctional personal qualities if they exist (-T) ...

$$CAC = f \text{ CMP} * V * K/S * (-T)$$

... Neither the amount of knowledge and experience a person may have acquired, nor the greatest value that person may place upon particular kinds of work can give a measure of that person's innate maximum current potential capability.” [Jaques, 1994, 25]

Difference between Applied and Potential Capability

“There is a fundamental difference between a person’s potential capability on the one hand, and values (interest/commitment) and skilled knowledge on the other. The difference is that his or her potential capability is an innate property of the person *as a whole*, whereas a person’s values and skilled knowledge are entities that have their own existence in their own right **independently of any particular person**, and which a person can acquire or shed. ...

... At any given stage in our development, there is an absolute maximum level at which we have the *potential* capability to work. It is constitutionally built in from conception.” [1994, 23]

In other words, potential capability is what a person IS, while applied capability is what a person HAS and can always choose not to use, or may be hindered from using optimally due to a lack of developmental potential.

Current Potential Capability

“Current Potential Capability (CPC), i.e., the highest level of work a person could currently carry, in work that he or she valued and for which he or she had the necessary skilled knowledge and experience, is a function of **complexity of mental process** (CMP) alone [Jaques, 1994, 25].

$$\text{CPC} = f \text{ CMP}$$

In terms of this presentation, **CMP** is defined by:

- type of logical reasoning (B1 to C4)
- phase of development of dialectical thinking (1-4).

Emergent Potential Capability

Being a 'nativist,' Jaques defines 'future' potential capability (FPC) as "the predicted level of potential capability that a person will possess at some specific time in the future. ... the FPC of a person at given ages can be reliably predicted once that person's potential capability at some specific age has been ascertained." [1994, 8].

To follow this definition, one does not need to endorse a nativist position, however.

In the developmental perspective here followed, it is not age (and associated time horizon), but level of meaning making (ED) that, in combination with level of mental complexity (CD), defines a person's EPC.

$$\mathbf{EPC = f (CD * ED)}$$

I note the cognitive progression to dialectical thinking (CMP → CD) and the relevance of psychological profile (NP):

$$\mathbf{EPC = f ((CMP \rightarrow CD) * ED) * (-)NP}$$

It's Up to 'HR'

- 'Human resources' comprise current applied capability (CAC), current potential capability (CPC), and emergent potential capability (EPC).
- If we choose to disregard CPC and EPC -- that is, potential capability -- **we have chosen the orthodox HR perspective that separates employee from customer relationships.**
- If we pay attention to CPC, thus cognitive development (CD), we have taken one step toward capability management.
- If, in addition, we pay attention to EPC as well, we have transitioned from "HR" to full Capability Management, as recommended in this presentation.
- **After having taken this step, all human systems of an organization are ripe for a revamp.**

The Right Person in the Right Place

Work: Complexity Architecture

People: Capability Architecture

<i>Level of Work Complexity</i>	<i>Breadth of Time Span</i>	C D E F	<i>Formal Logic Index [TYPE]</i>	<i>Systems Thinking Index [STI]</i>	<i>Risk-Clarity-Potential Index [RCP]</i>
VIII	50 yrs	↔	C4	>70	5(4)
VII	25 yrs	↔	C3	>60	5/4
VI	10-20 yrs	↔	C2	50-59	4/5
V	5-10 yrs	↔	C1	40-49	4(5) - 4
IV	2-5 yrs	↔	B4	30-39	4(3) - 4/3
III	1-2 yrs	↔	B3	20-29	3(4) - 3/4
II	3 mo - 1 yr	↔	B2	10-19	3
I	1 day - 3 mo	↔	B1	<9	2/3 to 3(2)

Size of Role



Size Person

REQUISITE ORGANIZATION

What Can We Realistically Expect in Managing Human Systems in Organizations?

Social-Emotional Attainment (ED)

Developmental levels define *Capability Ceilings* that determine what a person can and cannot do at a particular moment, especially in terms of leadership and interpersonal capability.

<i>Main Developmental Stages*</i>	<i>Characteristic</i>	<i>% Attained **</i>
5	Self-aware; "leader"	9 %
4	Self-authoring; "manager"	25 %
3	Other-dependent; "contributor"	55 %
2	Instrumental; "operator"	10 %

* In Kegan's nomenclature (1982), there are four main stages, with four intermediate levels between each.

** About 1% reach levels higher than level 5.

Data on Cognitive Attainment (CMP → CD)*

Orientation/ Frame of Reference (FOR)	Phase 1 (Fluidity <10) <i>Dualist</i>	Phase 2 (Fluidity <30) <i>Dualist in Transition</i>	Phase 3 (Fluidity >30<50) <i>Relativist</i>	Phase 4 (Fluidity >50) <i>Dialectical (parallel) Thinker</i>
Stage of Reflective Judgment	4	5	6	7
<i>% of empirical sample</i>				
41+			50	50
36-40		15	57	29
31-35	19	40 [?]	26	16
26-30	15	47	3	35
21-25	51	17	14	1
16-20	29	6	2	

* King & Kitchener 1994, 149.

Summary of CDF Applications

Steps in Applying CDF

1 Work Complexity Assessment

2 Human Capital Audit

3 CDF Data Collection

4 Scoring & Analysis

5 Capability Assessment

6 Feedback & Strategic Summary

Succession
Planning

Recruiting High
Potentials

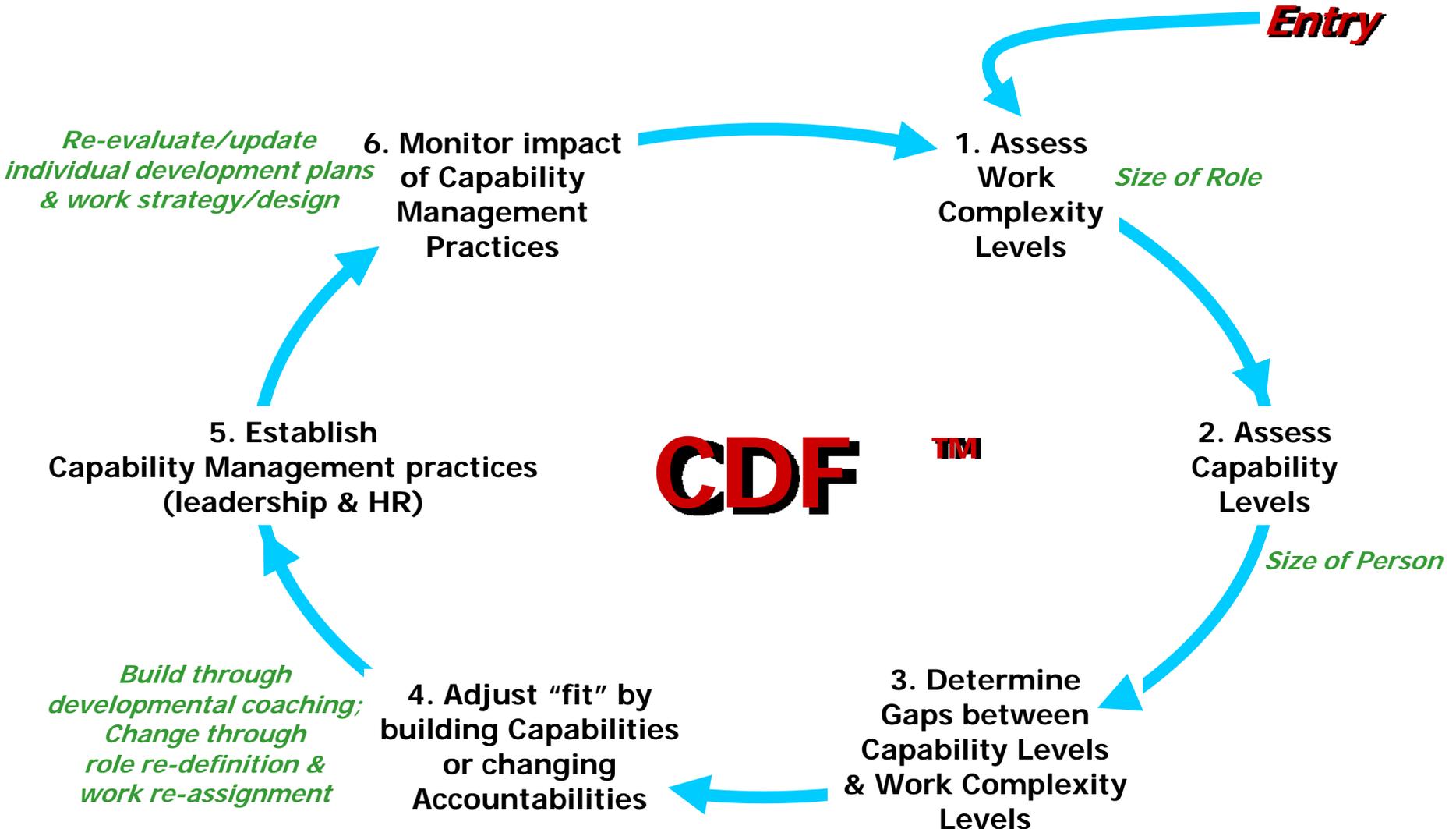
Developmental
Coaching

Team
Development

Corporate Risk
Management

Strategic
Capability
Planning

CDF Engagement Strategy



Capability Management

In summary...

Capability *measures two main aspects of human capital:*

1. Individuals' developmental readiness to take on work actually—and potentially—assigned to them.
2. Individuals' effectiveness in the work for which they are held accountable.

Appendix

- 1. More about ‘Work’**
- 2. The IDM Education Program**

A New Look at ‘Work’

WORK is the ineffable process of exercising discernment, judgment, and discretion along the path to goal completion – where ‘goal’ is a “what-by-when” (with time limits)

[Elliot Jaques]

Definition of ‘Work’

- Work is a mental process that has cognitive, social-emotional, and behavioral aspects.
- **There presently is no cogent theory of work.**
- E. Jaques has pioneered central notions of such a theory, basing work on the ability to process information over three different **orders of complexity**:
 - A: the natural world (amoebas to the social animals) [A1 to A4]
 - B: lower levels of cognitive development [B1 to B4; Strata I to IV]
 - C: higher levels of cognitive development [C1 to C4; Strata V to VIII]

We can describe the behavior of beehives as that of an “upwardly divided A2-team” where a minority of bees called ‘scout bees’ redirects a conjunctively thinking swarm (A2) to a new residence though thinking in strategic alternatives (A3)

Jaques's Four Types of Mental Processing

(defined in terms of formal operations)

Type 1 ('or')	Type 2 ('and')	Type 3 ('if')	Type 4 ('iff')
<u>Disjunctive</u> <u>[declarative]</u> <u>Reasoning:</u> Bringing forward a number of separate ideas, with no explicit connections made.	<u>Conjunctive</u> <u>[cumulative]</u> <u>Reasoning:</u> Bringing together a number of different ideas, none of which can make a case, but together they do.	<u>Conditional</u> <u>[serial]</u> <u>Reasoning:</u> constructing a line of thought made up of a sequence of ideas, each of which leads on to the next, thus creating a chain of linked reasons.	<u>Bi-conditional</u> <u>[parallel]</u> <u>Reasoning:</u> examining a number of other possible positions, each arrived at by conditional thinking, and held in parallel, going back and forth between the chains.

* According to Jaques, these four types *recursively* occur over four levels (depending on the level of abstraction): A to D. Of these, two levels, B and C. are crucial in organizational work.

Four Cognitive Types of Work

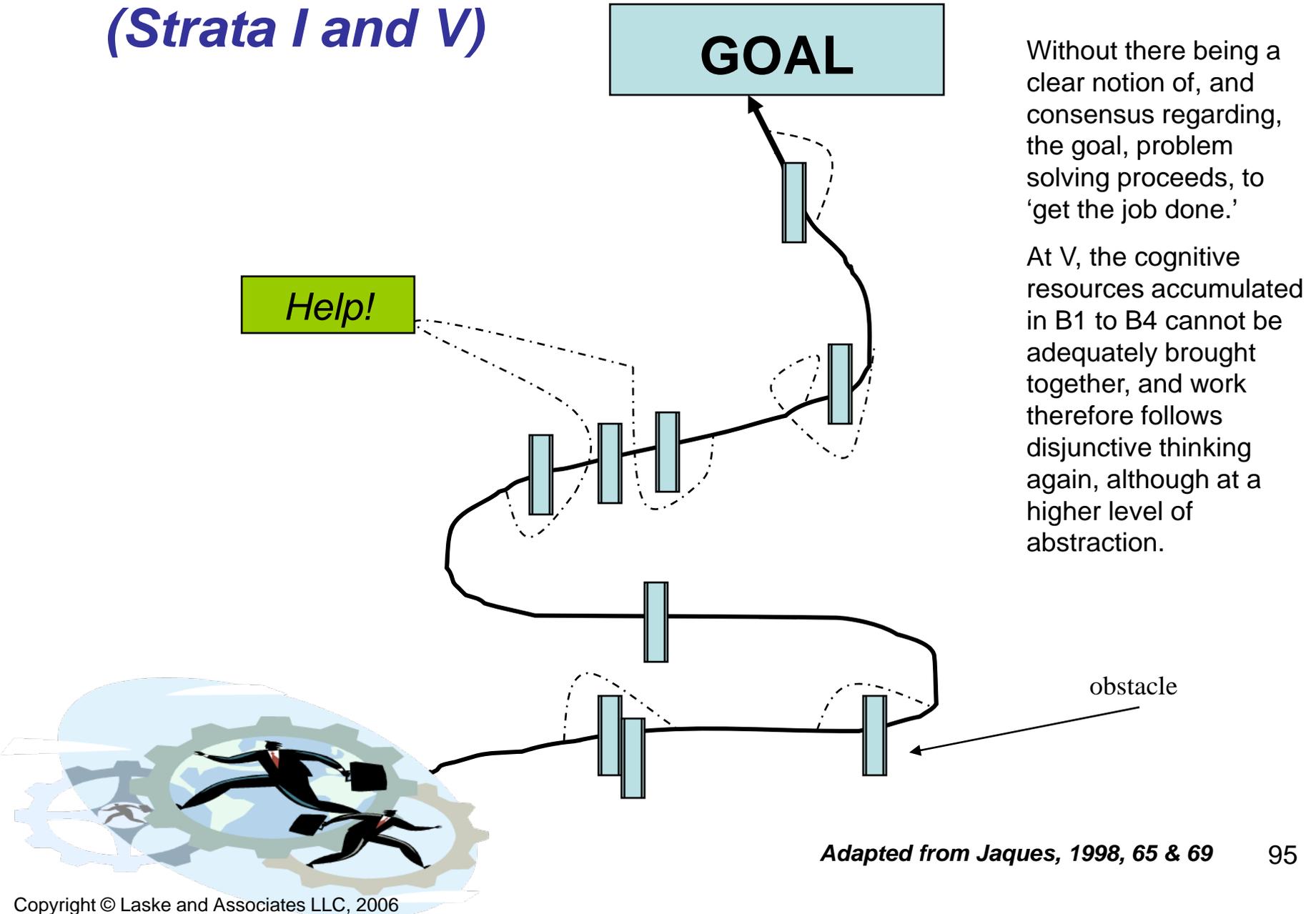
(based on Jaques's Types of Mental Processing)

Strata I & V	Strata II & VI	Strata III & VII	Strata IV & VIII
<u>Direct Action</u>	<u>Diagnostic Accumulation</u>	<u>Planning</u>	<u>Parallel Thinking</u>
[based on <u>disjunctive or declarative reasoning</u>]	[based on <u>conjunctive or cumulative reasoning</u>]	[based on <u>serial or conditional reasoning</u>]	[based on <u>bi-conditional or parallel reasoning</u>]

* According to Jaques, the four types of logical reasoning *recursively* occur over four levels (depending on the level of abstraction): A to D. Of these, two levels, B and C. are crucial in organizational work.

- **Strata I to IV belong to the second, V to VIII to the third, order of information processing complexity.**
- **The central divide is the 'post-bureaucratic boundary' between Strata IV and V, or B4 and C1, where the *transition to dialectical thinking as systems thinking* is made.**

Work as Direct Action (Strata I and V)



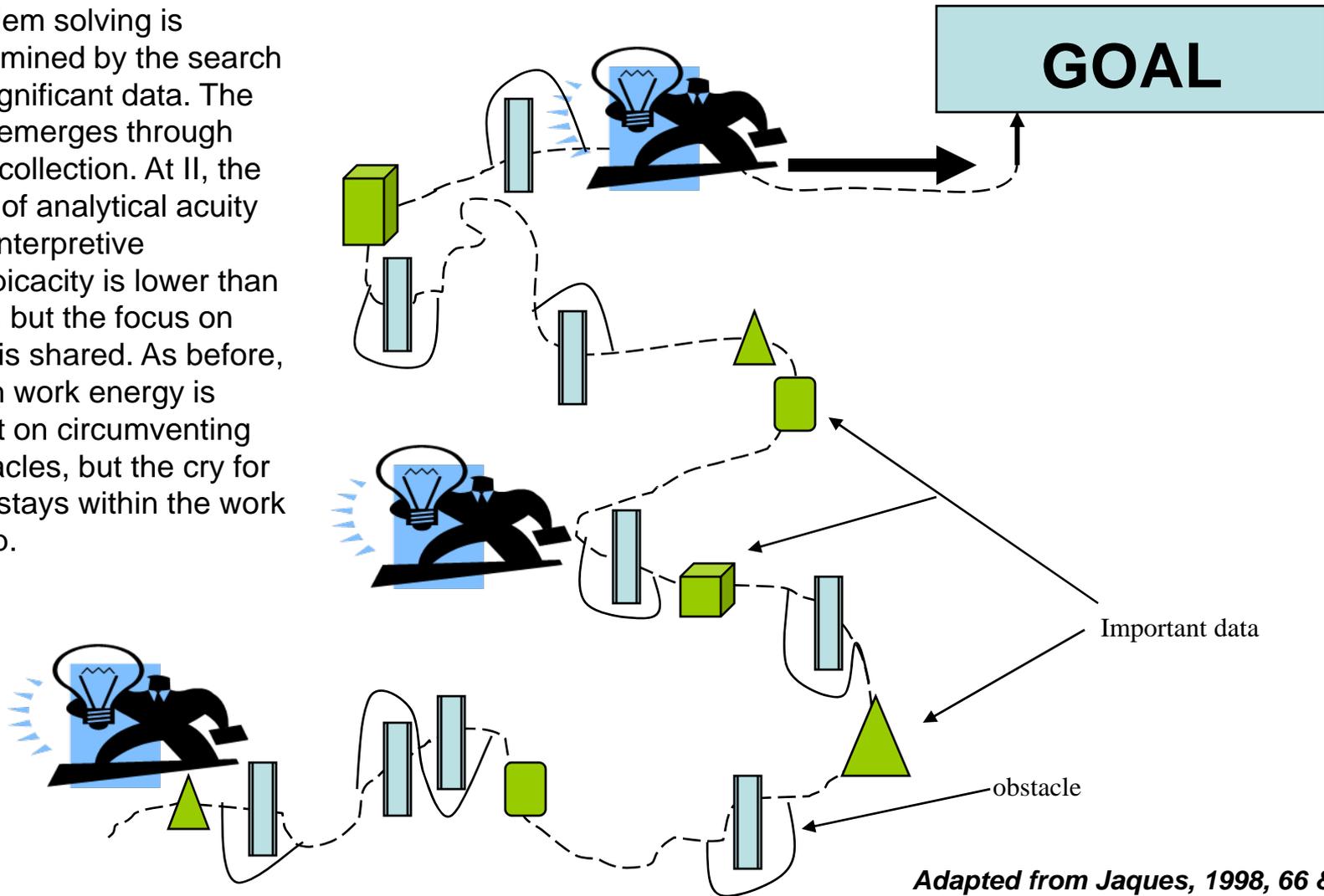
Without there being a clear notion of, and consensus regarding, the goal, problem solving proceeds, to 'get the job done.'

At V, the cognitive resources accumulated in B1 to B4 cannot be adequately brought together, and work therefore follows disjunctive thinking again, although at a higher level of abstraction.

Adapted from Jaques, 1998, 65 & 69

Work as Diagnostic Accumulation of Significant Data (Strata II & VI)

Problem solving is determined by the search for significant data. The goal emerges through data collection. At II, the level of analytical acuity and interpretive perspicacity is lower than at VI, but the focus on data is shared. As before, much work energy is spent on circumventing obstacles, but the cry for help stays within the work group.

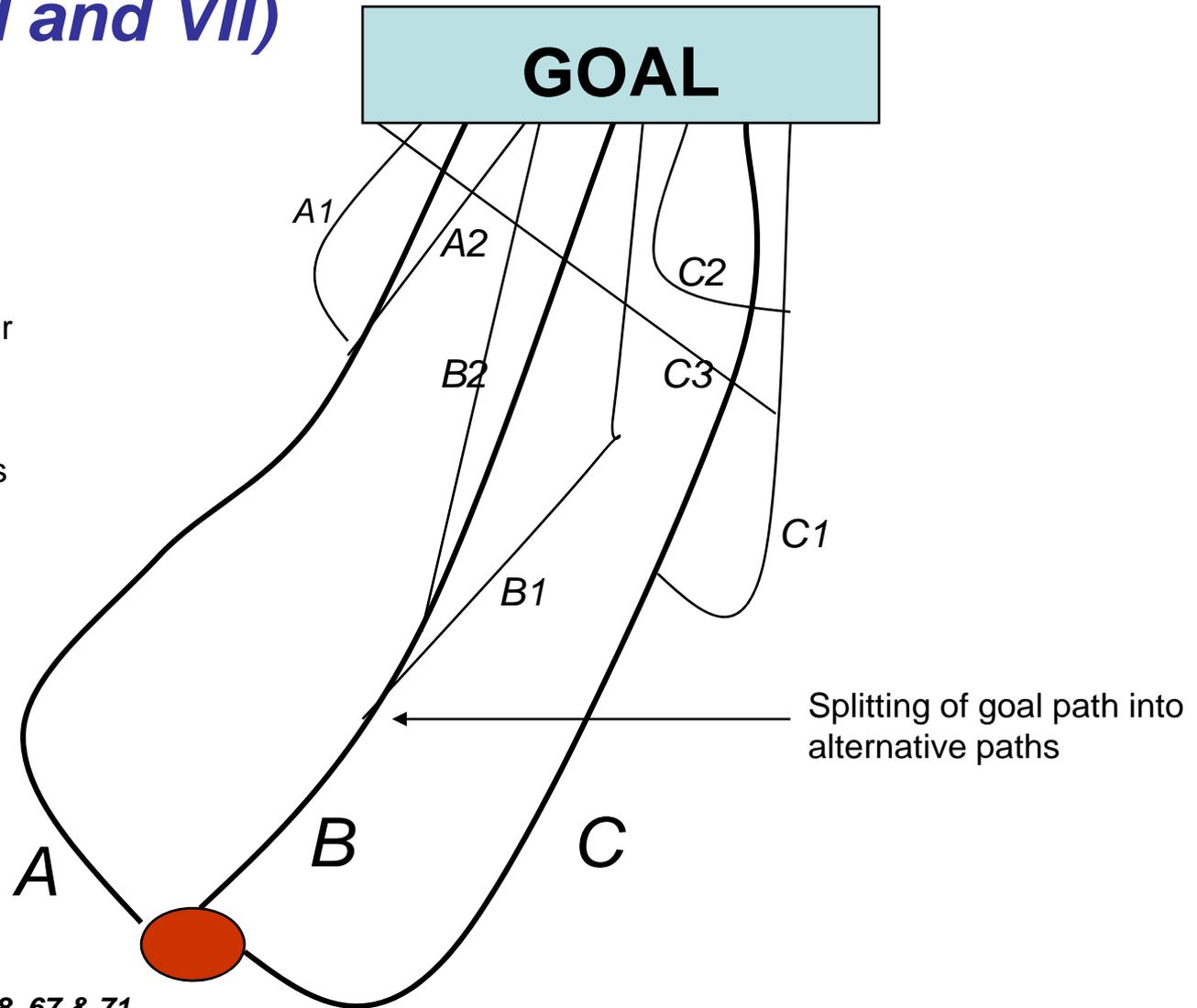


Adapted from Jaques, 1998, 66 & 70

Work Based on Pursuing Alternative Goal Paths (Strata III and VII)

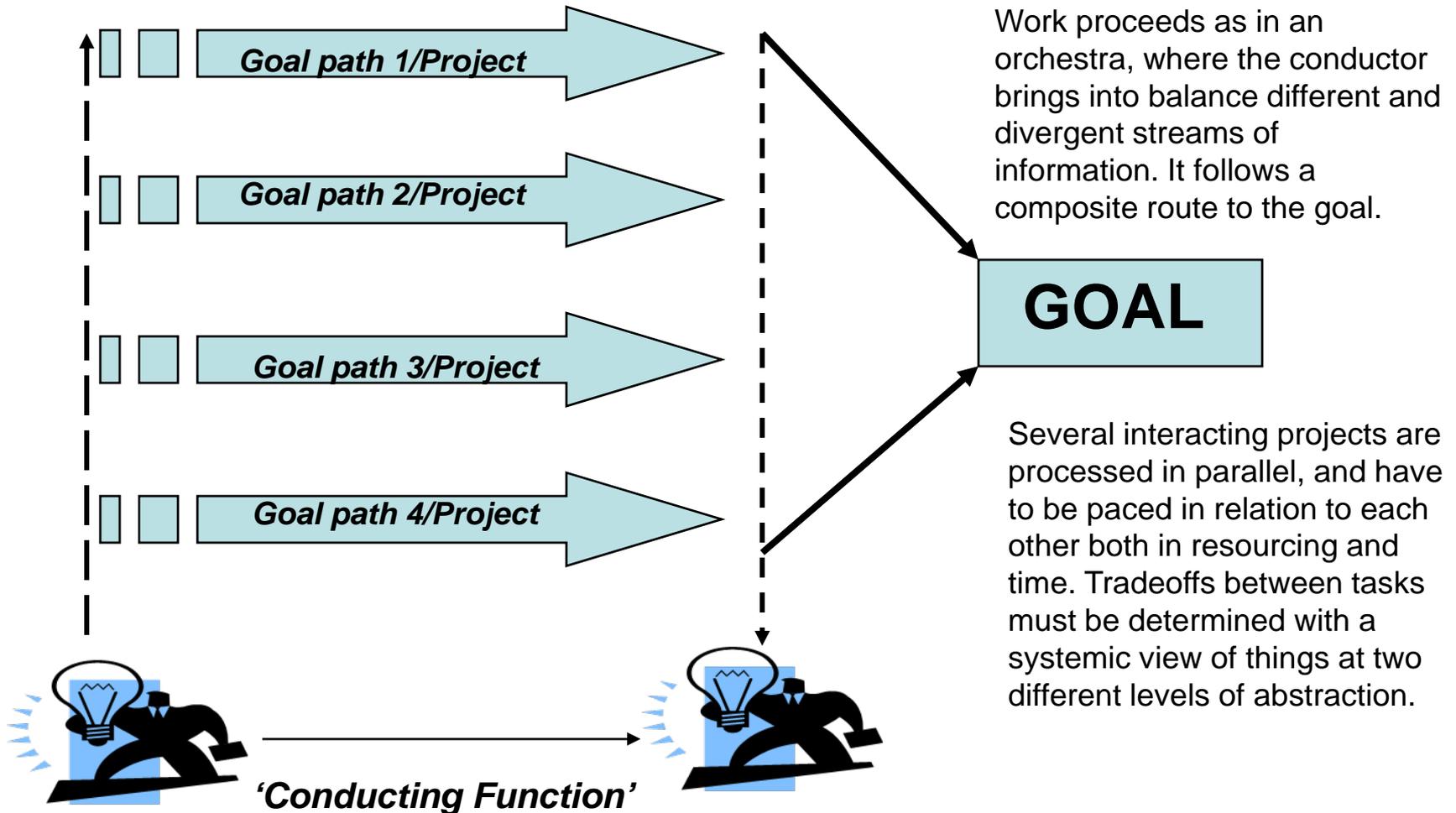
Problem solving is encompassed within a comprehensive plan to reach an established goal. Alternative goal paths are pursued, rather than a linear path.

Complexity derives from the splitting of goal paths when the need arises to deviate from predictions or expectations.



Adapted from Jaques, 1998, 67 & 71

Work Based on Parallel Goal Pursuits (Strata IV and VIII)



Adapted from Jaques, 1998, 68

A Program of Developmental Education

Overview of IDM Programs

IDM Program Modules	Focus	Continuing Education Credits	Certification
<u>Program One</u>	Comprehensive basic program	80	Certificate of Attendance
Module A [preceded by Gateway [16 credits]	Social-emotional	16	Certificate of Attendance
Module B	Cognitive	16	Certificate of Attendance
Module C	Psychoanalytic-behavioral	16	Certificate of Attendance
Module D	Case Study Synthesis of A to C	16	<i>Certificate of Developmental Assessment</i>
<u>Program Two</u>	Extension of Module D: 3 further case studies	16	<i>Developmental Coach/Consultant</i>
<u>Program Three</u>	Academic Thesis	Depending on scope of thesis	In affiliation with a university

* 16 credits are typically acquired over 8 weekly 2-hr tele-class sessions spread over 2 months (8 weeks). Thus, to acquire 80 credits takes 10 months. The typical time taken by students to write the Module D case study is about six weeks, bringing the total time needed for completing Program One to just under a year.

Program Information

- The Interdevelopmental Institute (IDM) has developed a comprehensive **certification program** based on which it teaches the methodology and techniques outlined in this presentation.
- Instruction is carried out through physical workshops as well as VOIP service (Skype, Vonage) conference calls, and by regular phone line.
- Interesting articles and an announcement of current courses appear in the monthly IDM Newsletter “Hidden Dimension Insights” found at <http://www.interdevelopmentals.org/publications-newsletter.php> and the newsletter archive.
- **In addition to the certification courses, IDM presents in-house and public presentations on the impact of adult development on human resources and human systems in organizations, and consults on capability management in organizations.**

Selected Bibliography

- Basseches, M. (1984). Dialectical thinking and adult development. Ablex.
- Kegan, R. (1994). In over our heads. Harvard University Press.
- King, P.M. & Kitchener, K.S. (1994). Developing reflective judgment. Jossey-Bass.
- Jaques, E. (1989 f.) Requisite organization, Cason Hall.
- Jaques, E. (1994). Human capability, Cason Hall.
- Laske, O. (2006). Measuring hidden dimensions (volume 1) IDM Press [on social-emotional development].
- Laske, O. (2008). Measuring hidden dimensions (volume 2). IDM Press [on cognitive development].
- Schein, E. (1999) Process consultation revisited. Addison-Wesley.
- Wilber, K. (2000). Integral Psychology. Shambhala

Interdevelopmental Associates

Serving Organizations' Human Systems
Aided by Research-Based Assessment Tools

Otto E. Laske Ph.D. Psy.D
51 Mystic Street
Medford, MA 02155 USA
781.391.2361

www.interdevelopmentals.org/idma.html

Jon Ebersole, Baar, Switzerland
Sunil Ahuja, Denver, CO, USA

A Branch of Laske and Associates LLC