Information Technology Project Management Failures:

Historical and Evolutionary Walkthrough from a Social Dynamic Perspective – A PRIMER to *"PREEMPTIVE AND ADAPTIVE PROJECT MANAGEMENT"*

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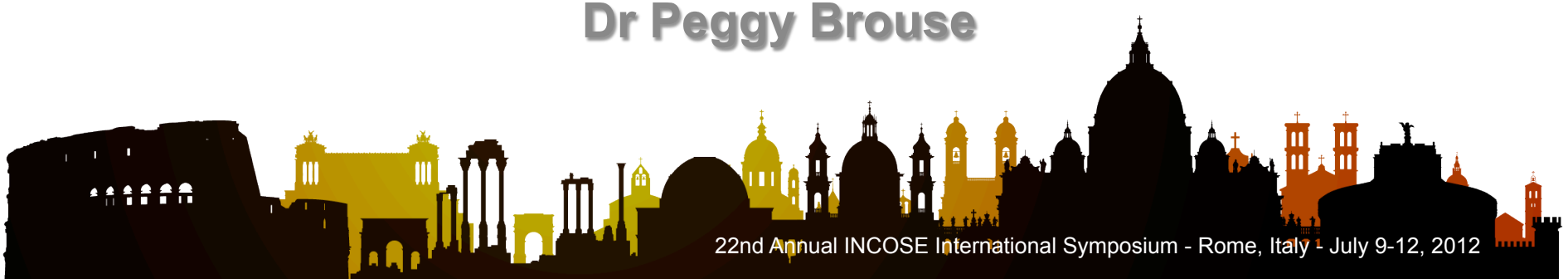


AGENDA

- Background
- Facts (“Trends”)
- Current Paradigm
- Challenges
- Ground Work
  - Historical Walkthrough and Classification of Program /Project Management (“Social Lens”)
  - Frameworks Walkthrough
- Hypothesis
- Research Approach and Next Steps

“The significant problems we face today cannot be solved at the same level of thinking at which they were created.”

Albert Einstein

Background

- Extensive and rising reliance on IT in any modern organization existing today
- Global IT spending rose 5.4% to 3.4 trillion on 2009 (Reuters, 2010)
- Gardner raises global 2011 IT spend forecast by 5.1%
  - Expected to top $3.6 trillion this year (Reuters, 2011)
- Increasing number of program/project management certifications, contractual requirements for certified professionals and
- Increasing number of project/program management frameworks.

Background - *Continued*

HOWEVER . . .

- Alarming reported project failure rate has been reported
  - "Chaos" reports (Standish Group, from 1994 to 2009)
    - Average percentage of projects that:
      - Succeed: 27.4%
      - Failed: 25.57%
      - Challenged: 47%

Background - *Continued*

- TCS (Tata Consultancy Services, 2007)
  - 62% of IT projects failed meeting schedules
  - 49% suffered budget overruns
  - 47% had higher than expected maintenance costs
  - 41% failure to deliver the expected business value and ROI
  - 33% failed to perform against expectations

Background - *Continued*

- Other reliable references such as Avanade, ESSU (European Service Strategy Unit, KPMG Surveys, etc sustain that on average 70% of all IT related projects fail to meet their objectives.

Facts – *"Trends"*

- Projects that fail report a similar set of failure "causes"
  - Poor requirements gathering
  - Poor analysis
  - Poor management
  - Poor planning and control
  - Etc.

Current Paradigm

- Addiction to “symptomatic” therapies
- Companies on constant “fire-fighting” mode
- It is likely that the rate of IT projects that fail are even greater than currently reported
  - Due to absence of “rewarding” mechanism for capturing lessons learned from failures
    - Perpetuates a systemic issue

Challenges

- "…traditional project management literature views upon projects very much as an analytical process, unable to explain the systemic character inherited in most projects."

Soderlund, 2004

- "Most research literature on the management of projects is relatively young and still suffers from a scanty theoretical basis and lack of concepts."

Dvir, 1996.

Challenges - *Continued*

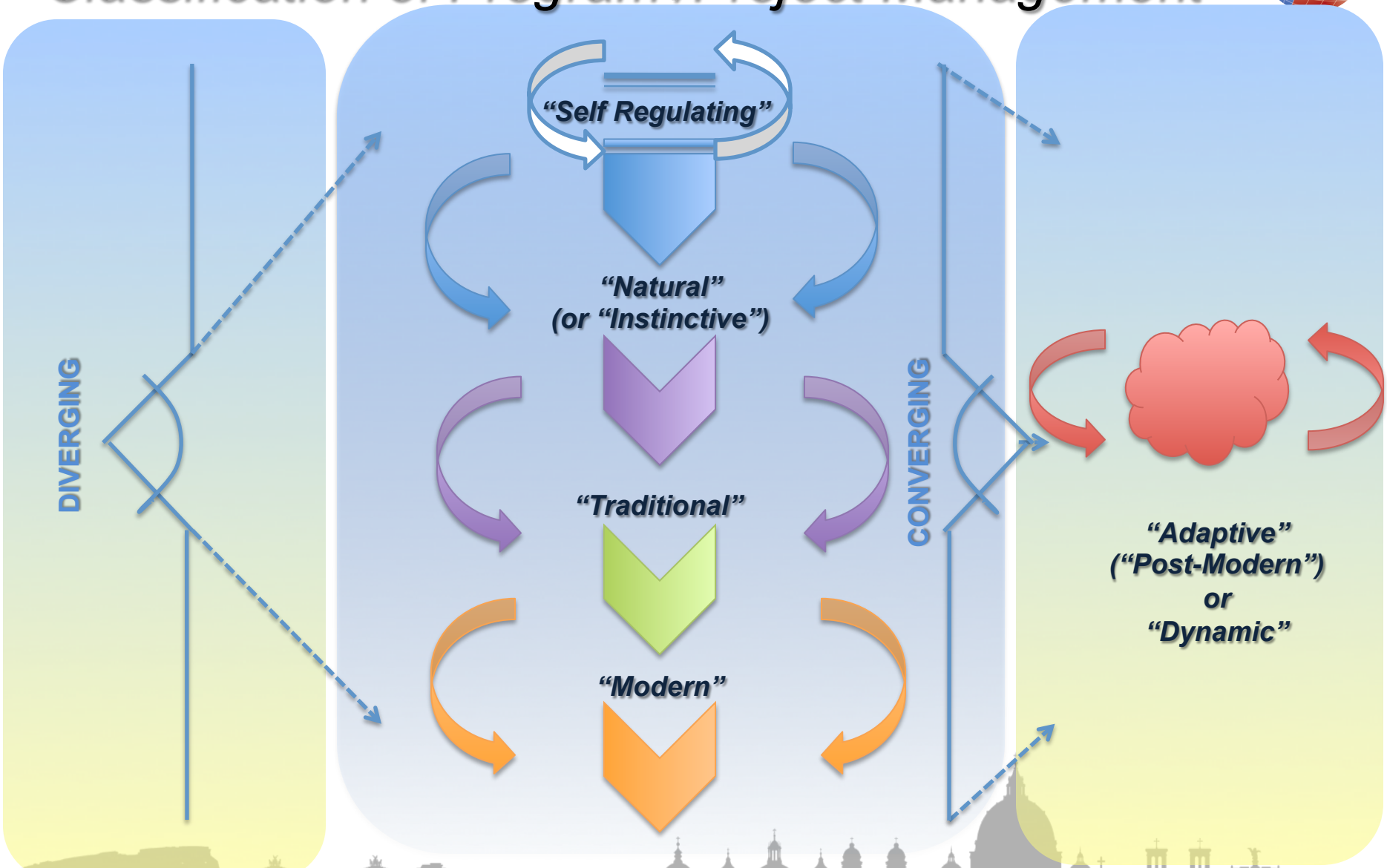
"Key issue is that frameworks and reports documenting IT project failure do not explain or increase our understanding about the actual causes nor how to overcome them."

Kim and Cham, 2008

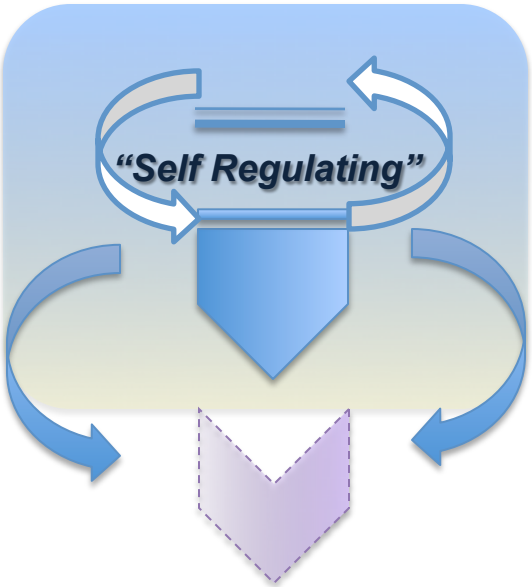
“Relying on causality and objectivity, two concepts challenged by contemporary physics, we leave ourselves little hope of making Social and Human Science progress.”

Manod and Borland, 2007

Groundwork: *Historical Walkthrough and Classification of Program /Project Management*



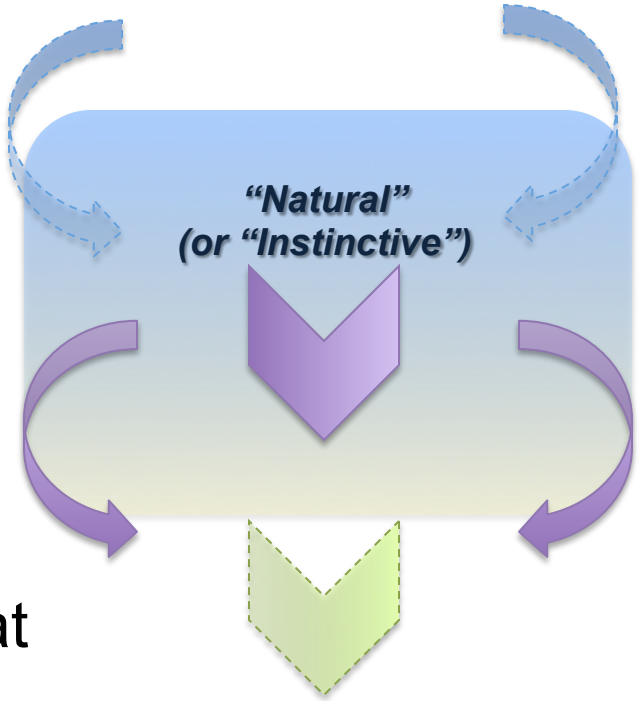
Groundwork: *Historical Walkthrough and Classification of Program /Project Management*



- "Self Regulating" (or adaptive) Programmatics
  - Well defined beginning and end
    - Triggers may lead to extinction of species
      - Complex interdependent systems adapt
    - Continuously evolving and adapting to new conditions resulting from cause-effective outcomes
    - Seeks the path of "least resistance"
      - Natural principle followed by primordial "projects" seeking overall system balance
    - Conditional can be classified within a "Social" dynamic (interdependent) system

Groundwork: *Historical Walkthrough and Classification of Program /Project Management* - *Continued*

- "Natural" (or instinctive) Programmatics
  - Emerged long before the formalization of program/project management practices (Gray & Larson, 2006)
    - Complex "social" constructs had to be managed in order to deliver the expected outcome
  - Examples included complex initiatives such as the Great Pyramids of Giza (2,250 B.C.), Great Wall of China (221 B.C.)
    - Some initiatives of smaller scales predating these "projects" also encompassed complex social constructs



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  - Examples included complex initiatives such as
    - the Great Pyramids of Giza (2,250 B.C., 20 years to completion, 10k workers (plus their respective families))
    - Great Wall of China (221 B.C., similar length in construction, 300k to 1.8 workers (3 phases)
  - Some initiatives of smaller scales predating these "projects" also encompassed complex social constructs

Groundwork: *Historical Walkthrough and Classification of Program /Project Management* - *Continued*

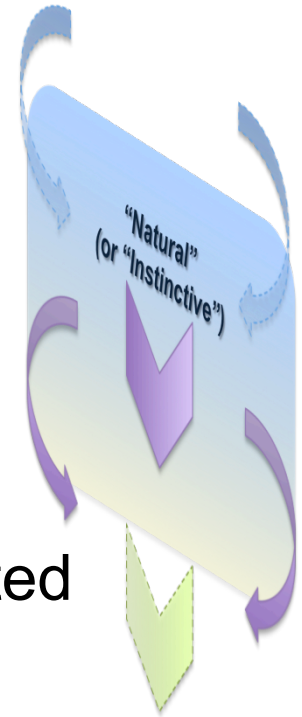
- "Natural" (or instinctive) Programmatics - Continued
  - Complex and lasting "social" dynamics and project structures/interdependencies impacted project outcomes as well as the overall economical and societal construct models
  - Infrastructure challenges:
    - Technological, roads, tools, housing, transportation, policies, procedures
    - Mixed work force
      - Forced laborers and paid employees
        - » Most did not share the same culture and/or language

Groundwork: *Historical Walkthrough and Classification of Program /Project Management* - *Continued*

- "Natural" (or instinctive) Programmatics - Continued
  - Social dynamics required planning, cross-training, and social ruling methodologies
    - At times leveraging "cults" to instill obedience and order
    - Creative communication means required
    - Complex cross-functional coordination
    - Skillful delegation authority and oversight

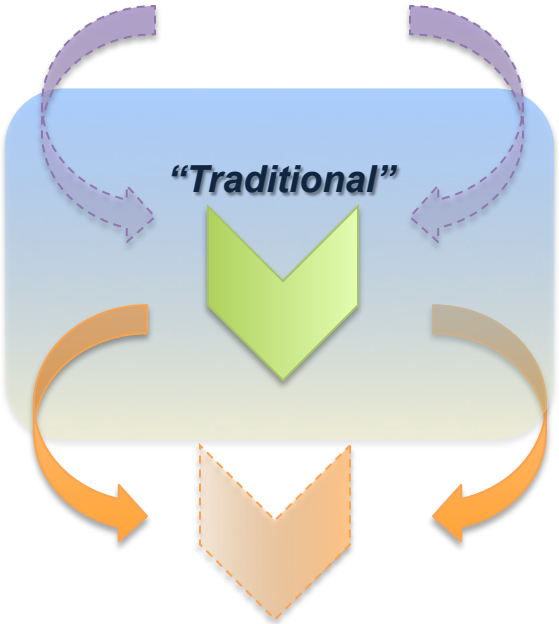
Groundwork: *Historical Walkthrough and Classification of Program /Project Management* - *Continued*

- "Natural" (or instinctive) Programmatics - Continued
  - Contracts emergency
    - Long Walls of Athens
      - 10 contractors
    - **The Coliseum**
      - » 4 contractors
  - Medieval times also required complex social constructs surrounding structures and sophisticated weapon technologies
    - Leveraged "ingenuity" and "creative thinking"
  - These projects could not have been successfully without an adaptive and evolutionary ("instinctive") system approach to project management
    - Incorporating skilful attention and management of complex interrelationships and naturally occurring "social" dynamics



Groundwork: *Historical Walkthrough and Classification of Program /Project Management* - *Continued*

- "Traditional" Programmatics
  - Driven by the Industrial Revolution of the 19th century
    - Early project managers ("Master Builders")
      - Business Finance and measurable (arithmetic) constructs leveraged to manage initiatives
      - No "formalized" program/project management tools available
    - Projects were successfully delivered as technology evolved at a very fast pace
      - The Transcontinental Railroad (later 19th century) has been documented as the first large scale "project"
        - » Pacific Railroad Act signed by Lincoln on July 1862
      - Involved a complex social construct



Groundwork: *Historical Walkthrough and Classification of Program /Project Management* - *Continued*

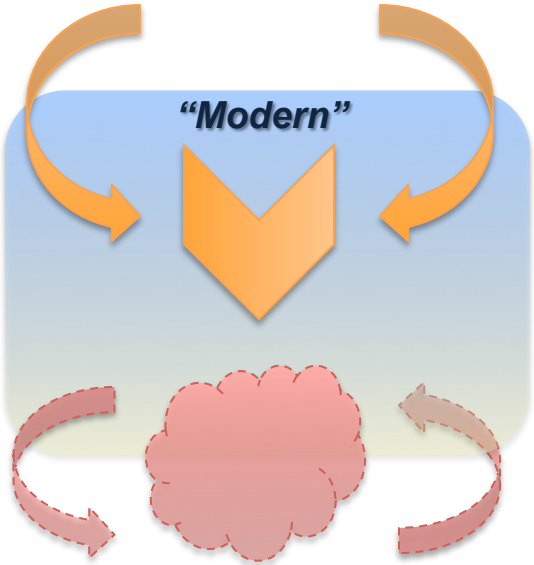
- "Traditional" Programmatics - *Continued*
  - Emergency of transportation and manufacturing projects demanded effectiveness
    - First "project manager" role documented under the Trans Mountain Oil Pipeline in Canada (Stretton, 2007)
    - Other references attribute the emergency of "traditional" project management practices to the inception of CPM/PERT in 1958 (Snyder and Klinem, 1987)
      - The "Polaris" project (Atlas missile program)
    - Considerable social-economic impacts and pressures ("cold war") at play
      - Successful completion of projects

Groundwork: *Historical Walkthrough and Classification of Program /Project Management* - *Continued*

- "Traditional" Programmatics – *Continued*
  - *The Empire State Building*
    - *Known as "precise project management of the early 20th century: (Beki and Kelly, 2009)*
    - *Starrett Brothers and Eken complete the construction on April 11, 1931*
      - *Ahead schedule and under budget*
    - *No formalized project management frameworks, methodologies and techniques leveraged*
      - *Complex social construct involved*
      - *"Natural (or "instinctive") methods applied*
        - » *"Common Sense" approach*

Groundwork: *Historical Walkthrough and Classification of Program /Project Management* - *Continued*

- "Modern" Programmatics
  - *Systems Analysis and Contingency Theories*
    - *Inception in the 20th century*
    - *Scientific management placed emphasis on productivity factors*
    - *Inception of Human Resources School (early 1050's)*
      - *Motivation and leadership functions*
      - *Leveraging a selective se of traditional and behavioral system viewpoint*
        - » *Not incorporated within program/project management frameworks as a "core" social interdependent component*



Groundwork: *Historical Walkthrough and Classification of Program /Project Management* - *Continued*

- "Modern" Programmatics - *Continued*
  - *Operations Research*
    - *Considered as the catalyst for CPM scheduling and future control systems*
  - *Introduction of other methodologies and program/project management bodies (1960's)*
    - *Quality Management*
    - *Program, project and portfolio management*
    - *International Project Management Association ("IPMA"), Project Management Institute ("PMI"), Association for Project Management ("APM") and other minor spin offs emerged attempting to formalize the project management practice*
  - *New type of work-force*
  - *Social construct dynamics complexity*
    - *Leveraging diverse and multidisciplinary workforce*
      - *Global perspective*
        - » *Complex social construct*
  - *What happened with the project success rate(s) since then?*

Groundwork: *Frameworks Walkthrough*

- Fail to deliver higher project success rates
  - *PRINCE, IPMA, MSP, Pmbok, DMAIC, etc.*
  - *Focus classification on Quality Management, Quality Improvement, IT Governance, Information Management and Project Management*

"Manage the cause,
Not the result."

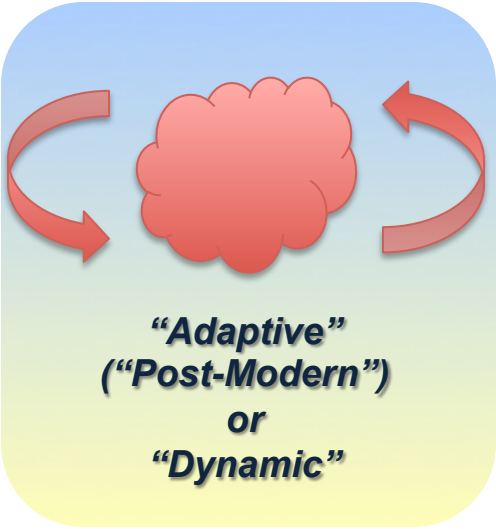
W. Edward Deming

"Do not look where you fell,
but where you slipped."

African Proverb

Hypothesis

- The authors hypothesizes that the root causes of IT project failures are not being addressed
  - Manifested by recurring (systemic) failures
- The authors hypothesizes that "social factors" are not being considered from a system dynamic perspective

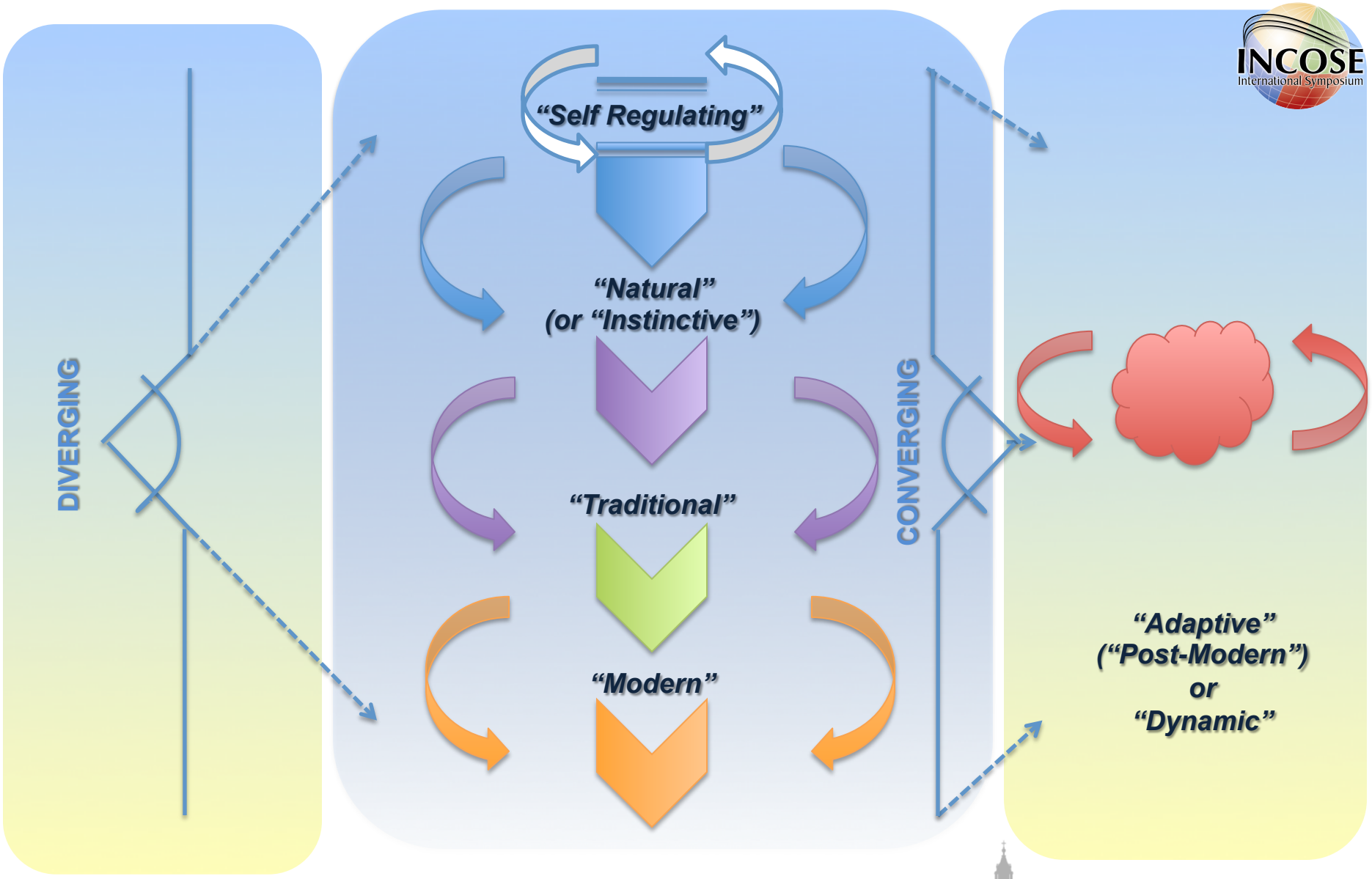


Research Approach

- Systems Thinking methods provide suitable means to access current patterns and their interdependencies
- Emerging factors from research findings are being modeled by the authors

Research Approach – *Continued*

- Quantitative and Qualitative Data
  - Literature Review
    - Complete
  - Interview to SME and Modeling Data (validation)
    - In Progress
  - Case Study (verification)
    - In Progress
  - Data Analysis


DIVERGING
"Self Regulating"
"Natural"
(or "Instinctive")
"Traditional"
"Modern"
CONVERGING
"Adaptive"
("Post-Modern")
or
"Dynamic"

“We don’t need better solutions, we need better thinking about problems.”

Attributed to Russell Ackoff, source unknown

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QUESTIONS?