




Institute for Enterprise Excellence
NCH Healthcare System

Friday, January 27, 2017
12:00 – 1:00 PM CT

“Systems Thinking: Key Concepts and Case Studies - Part 2”
Dirk van Rossum

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Housekeeping and Ground Rules

Phones will be on mute.
Use “chat” function to ask questions.
Webinar will be recorded and available for viewing and listening for all.

Three behavior change theories that do not work

Theories about Behavioral Change & Sustainability

1 Field of Dreams Theory  2 Document Theory  3 Beat Them Up Theory 

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This can only be accomplished by Leaders (top management) ... cannot be delegated **And one that does**

Behavior Change...

DEFINE 1 PRACTICE 2 MESSAGE 3 BUILD 4

- Define the Desired Actions & Behaviors
- Practice new behaviors
 - Real change comes from individuals doing new things
- Create new kinds of **conversations**
 - “This would only work if we told each other the truth, wouldn't it?”
- Build systems that are necessary to reinforce ideal behaviors.

Most want to jump to step 4 - doesn't work

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The IEX System Standard

working ON THE SYSTEM

| Purpose & Scope | Key Players in the System | | |
|---------------------|---------------------------|-------------------|---------------------|
| Performance Outcome | Behavior Leaders | Behavior Managers | Behavior Associates |

working IN THE SYSTEM

UPLINK SYSTEMS → Process Flow → DOWNLINK SYSTEMS

Tools Triggers Measurements

Renewal mechanisms & Monitoring

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The Program Path

RESULTS Performance Outcome

TOOLS Faceted Elements

SYSTEMS Framework & Infrastructure

The Next Program Path

If you view this as just another tool

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If you view this as a way to drive ideal behaviors and sustainable results

The Philosophy Path

PURPOSE

RESULTS Performance Outcome

GUIDING PRINCIPLES Behavioral & Cultural


CULTURE & CLIMATE

TOOLS Faceted Elements

SYSTEMS Framework & Infrastructure

ENVIRONMENT & RELATIONSHIPS

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Systems Thinking Part 2

Dirk van Rossum




Not-for-profit, multi-facility healthcare system located in Naples, Florida, United States.

- Two hospitals with a total of 716 beds.
- 732 physicians with medical facilities in dozens of locations throughout Collier County and southwest Florida.
- 2016 the system had 40,000 admissions, 98,000 emergency room visits, 3,422 births, 405 open heart surgeries, 11,800 surgical procedures, and 4,300 employee colleagues.
- NCH is a member of the Mayo Clinic Care Network.
- NCH is sponsoring the Blue Zones Project for Southwest Florida.

Mission: to help everyone live a longer, happier, healthier life.

For more information, visit www.nchland.com

Purpose




What are effective ways to Aid learning and application of systems thinking?

Discuss

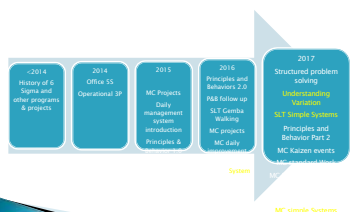
- Mental models & Systems-Thinking
- Thoughts on practical ways to apply Systems Thinking

Learning Objectives

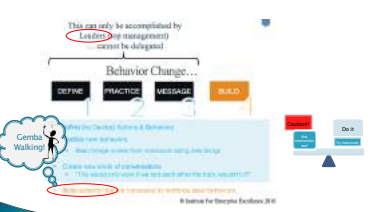
- Understanding of a "System"
- How we think
- Consequences of non-systemic thinking
- A way to adopt Systems thinking
- How to impart the knowledge




NCH Transformation Roadmap



Previously, on Systems...




System Standard Template



Understanding Current Experiment

Back-of-the-card 1


- What was the last step you tried?
 - Learn 3 principles and associated behaviors
 - Teach systems concepts
 - Define a basic Gemba Walk system
 - Applied system standard template in event
 - Research Systems thinking
- What did you expect to accomplish?
 - 3 Principles transform conversations and behavior
 - Conversational understanding of systems concepts
 - All SLT conduct regular CW minimum 2x per month
 - Beginner proficiency by December 2016
 - Build some other basic systems
 - Find better ways to get people to learn systems thinking



Understanding Current Experiment

Back-of-the-card 2

- How did this turn out- what happened?
 - Got stuck on some obstacles
 - Conceptualizing Systems remains a challenge
 - Did not complete a draft of the system standard
 - Did agree a basic structure to govern gemba walks
 - Gemba walks did not take place as envisaged
 - There is much to learn about systems
- What did this reveal- what did you learn?
 - Discovered some underlying mental models at root of resistance to change
 - Follow the 5 Questions: log obstacles and move on
 - Either pick one obstacle to work on next, or complete the system standard
 - It is helpful to provide a specific topic for Gemba Walks
 - All is not lost- participants learned their approach did not work
 - Systems thinking is a broad, deep & uncommon topic

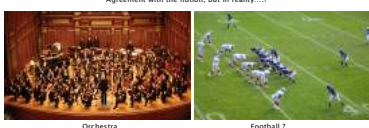


Other Systems Experiments at NCH

- Idea generation management system with RT
- Audit rounding system for infection prevention
 - Worked really well
 - Identified behaviors first
 - Then build process that would generate and support desired behaviors instead of trying to fit it the other way around
- Powerful learning aid- internal reference when talking with people about systems
 - When people come with a request e.g. for a report development - the template comes to mind: behaviors, processes and tools-
 - Helps clarify thinking process

Notion: Organizations as System

Agreement with the notion, but in reality...?



Orchestra Football ?

The System structure determines behavior

Complex Adaptive Systems & Simple Rules

Swarm of Starlings

Geese

Ball of Fish

Cyclists

System Performance

"Every system is perfectly designed to get the results it gets." (Deming)

- All systems function in perfect alignment with their underlying structure
- The perceived gap in performance is **Not** between performance and the structure
- The gap is in our *expectations* and the structure

Misguided Mental Models??

THE MIND AND ITS APPLICATION TO HEALTH CARE: A CASE STUDY: The Application of Six Sigma Strategies to Medication Administration. Ed Chaplin

Thoughts About Systems Thinking

- Now that we have provided material to have an understanding of "Systems"...
- Let's review of what the subject "Systems Thinking" is about
- Find Better ways to manage our *expectations*

Think Systemically

Operational Definitions

- Thinking about how and why component work together across the organization and the impact of individual areas/departments on the whole (IEX)
- A vantage point from which to see a whole, a web of relationships, rather than focusing only on the details of a particular piece. Events are seen in the larger context of a pattern that is unfolding over time (High Performance Systems now HSE Systems)

Profound Knowledge

- How do we know we know something?
- How do we know what we think we know is really so?
- How exactly do we think?
- How does this affect mental models?

Ed Chaplin, MD

How do we think?

1. Thinking, Fast and Slow (D Kahneman)

- Quick automatic automatic thoughts
 - Skill lea
 - Routine
 - Patterns
 - Habits
- Slow Effc
 - When le
 - When fa

Accuracy

Speed

Yes: Learning to Drive a car or bicycle

How we "Know" Something

Thinking Fast & Slow

MENTAL MODELS

THE WORLD

Actual Reality

Perceived Reality? We see things as we are...

The Prevailing Flawed Mental Models

- Undefined mental models go unrecognized
- Such mental models become invisible anchors that disrupt necessary change or continuous improvement
- The earth is flat
- The sun orbits around the earth
- All variation must be responded to and routed out
- Annual Budgets
- Assumption that optimizing the parts will optimize the whole
- Ignoring the effect of dependencies and bottlenecks (constraints)

System & Team Scenario

Bowling team 1

Bowling team 2

...Endo Team... ..ED team...

...Cardiac-Tele team...

Working in Silos is the prevailing model!

Undesirable Effects: The Vulnerable System Syndrome*

- Healthcare institutions are complex, tightly coupled systems
- Recurrent self-perpetuating interacting pathologies of vulnerability
 - Blame (of the individual)
 - Denial (blindness to existence of error-provoking system weaknesses)
 - Single minded pursuit of the wrong kind of excellence (productivity and financial blinkers)
- VSS exists in most complex organizations
- Blindness to VSS is common

* Reason, Cathy, Levin "Diagnosing 'vulnerable system syndrome': An essential prerequisite to effective risk management"

Learning Cycles

Reason, Cathy, Levin "Diagnosing 'vulnerable system syndrome': An essential prerequisite to effective risk management"

Why are Prevailing Mental Models Off?

"The characteristic way of management that we have taught in the Western World is to take a complex system, divide it into parts, and then try to manage each part as well as possible. And, if that's done, the system as a whole will behave well...."

and that's absolutely false...

Russ Adloff
w/ W. Edwards Deming, 1990

Thinking Out of Balance

- Overly focused on the parts (reductionism) to the exclusion of the whole (holism)
- Our view is excessively hierarchical (we tend to view the organization as a hierarchical tree) to the exclusion of more complex, distributed networks.
- Over reliance on static categories rather than part-whole groupings that results from perspectives
- Prevailing view is overly linear and causal at the expense of seeing nonlinear webs of causality
- Bias toward seeing structural parts but overlooking dynamic relationships
- View is based on bivalent (2-states) rather than multivalent (many states) logic

Ref.: Cabrera & Cabrera, Systems thinking made Simple

Overcoming & Defeating

How do we best

- Overcome inaccurate mental models?
- Defeat poor habits?

"Unlearn" what is common practice?

Learn new better patterns, Systems Thinking patterns

Improvement Workshop Experiments

- An identified Problem or opportunity
- Learn *Systems Thinking Patterns* through integration of:
 - The 5 improvement questions incl. behaviors
 - Structured problem solving with Domino exercise incl.
 - 5 Why, Affinity diagram and fishbone
 - Variation with funnel exercise
 - Systems with huddle exercise
 - Value stream mapping or process mapping
 - Flow with Lego game and reference to the above
 - The A3
 - System Standard

The Funnel Experiment

- Place a sheet of paper on a table and mark a target on it with an "X"
- Place funnel over the X
- Drop a marble through the funnel
- Mark where marble lands
- Repeat 30 times

4 rounds:
 1 leave funnel in place
 2 move funnel to compensate
 3 move funnel to compensate
 4 move funnel to compensate

simulates reaction to results

Taking Action

Or Not Take Action

"Management must understand the theory of variation if you don't understand variation and how it comes from the system itself, you can only react to every figure. The result is you often overcompensate, which it would have been better to just leave things alone."

"Don't just do something, stand there." -- Deming

Adapted from Colson

Better Mental Model

Systemic Behavior
 Optimized System Performance
 Systems Culture?

Edvinsson & Malone, Systems Thinking Made Simple

Thoughts on Overcoming Fear

- Coaching questions lead to self discovery
- Build environment of trust - break cycle of mistrust
 - Understand variation
 - Place and time for improvement experimentation
 - Applaud failed attempts at getting better, not just "successes"
 - Gemba walk
- Focus on basic routines
- Learn new routines and patterns through non threatening and fun exercises
 - Lego game
 - Group shuffle huddle
 - Domino game
 - Funnel exercise
- Proceed in small rapid increments
- Create and ride motivation wave - ie be prepared for rapid follow up

Using the 5 Questions (Improvement Kata)

- What are the Obstacles? Which "one" are you working one?
 - Leaders are not adopting consistent and regular Gemba Walk behavior
 - Leaders struggling to not "do"
- What are the next steps you will take?
 - Workshop to create SLT Gemba Walk System
 - Additional Education on systems
 - Variation with funnel experiment
 - Create Gemba Walk system standard
 - Structure and align conversations around improving patient flow
 - Model cell improvement suggestions & visual management system

Next Time

- Update on our experiments
- More about thinking systemically
- Some mapping alternatives
- What others are doing to teach systems thinking
- Integration with Thinking Processes from TOC

Resources

- Systems Thinking Made Simple- New Hope for Solving Wicked Problems- Derek Cabrera & Laura Cabrera
- The New Economics- W. Edwards Deming
- The Deming Dimension- Henry & Neave
- The Systems Thinking Playbook- Exercises to stretch and build learning and systems thinking capabilities. Sweeney & Meadell
- ix2in Thinking <http://www.ix2in.org>
- IX <http://www.instituteforexcellence.org>
- Diagnosing "vulnerable system symptoms". An essential prerequisite to effective risk management
JT Reason, J Carthy, MG de Val
- Teaching Variation to Leadership <http://www.instituteforexcellence.org/knowledge/variation-teaching-variation-leadshipto>
- The Funnel Experiment <http://www.instituteforexcellence.org/knowledge/variation-teaching-variation-leadshipto>
- Systems Thinking and TOC <http://www.instituteforexcellence.org/2014/01/>
- Mental Models <http://www.instituteforexcellence.org/knowledge/mental-models>
- Habits of a Systems Thinker <http://www.instituteforexcellence.org/systems-thinking/habits-of-a-systems-thinker>
- Mark Graber's lean Blog <http://www.leanblog.org/>

The End Thank You!

<http://instituteforexcellence.org/webinars/>

Upcoming Webinars

Webinar Recordings

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IEX

Monday, February 20, 2017
12:00 - 1:00 pm CT

"Strategy Execution and Strategy Deployment"
Ajay Raikar, President, Partners in Business Excellence

This webinar is the second in our series of webinars which are helping to draft one of our next white papers: "The Pracademic's Guide to Strategy Deployment."

In this webinar, Ajay will discuss his thoughts on executing strategy and deployment of strategy.

<http://bit.ly/executestrategy>

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Friday, March 10, 2017
12:00 - 1:00 pm CT

"Tiered and True...Communication Strategies for Rural Health Care"
Lisa Radtke, Dave Rooney, and Susan Heitman from Winneshek Medical Center

Winneshek Medical Center (WMC) was recently named a Top 20 Critical Access Hospital out of the 1,300+ critical access hospitals in the nation by the National Rural Health Association. They shared their story about the application of lean principles and methods at the National Rural Health Association annual conference in September, and will share their story with us.

<http://bit.ly/leanruralhealth>

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Friday, March 31, 2017
1:00 - 2:00 pm CT

"The Power of Vulnerability in Coaching"
Debbie McAllister, Hansel Coaching

Our ability to be open and vulnerable establishes a deeper level of trust as well as a comfortable, honest environment for leaders who are on their journey to transform. By sharing our own vulnerability, we allow ourselves to fully "show up" as a leadership coach. Additionally, it allows us to better coach leaders toward becoming vulnerable themselves.

<http://bit.ly/vulnerabilitycoaching>

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IEX

Do you have a story or lessons to share?
We are scheduling our monthly webinars for 2017
mike.stoecklein@instituteforexcellence.org

IEX IEX Pracademic Learning and Sharing Network
Website - 361 Members

Join our group on LinkedIn mike.stoecklein@instituteforexcellence.org

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Upcoming opportunity:
MemorialCare Health, Long Beach, CA
February 8-9, 2017
<http://bit.ly/IEXSystemsMemorialCare>