Self Organizing Systems

Building An Operation Of Systems

Josh Schultz / SMB Bash 2021

Why I Love Systems

Systems Enable Powerful Outcomes From UnPowerful Inputs


HOW WOLVES
CHANGE RIVERS

Systems Enable Emergent Outcomes From Small Changes

What if?

Your Business Already Has Systems

Business Systems

Business Owners Want

- Make an impact on our community
- Change our industry
- Freedom to act as desired
- Sell the business
- Lower the stress of running their business
- Reduce the level of problems that occur

Cash Flow Solves This

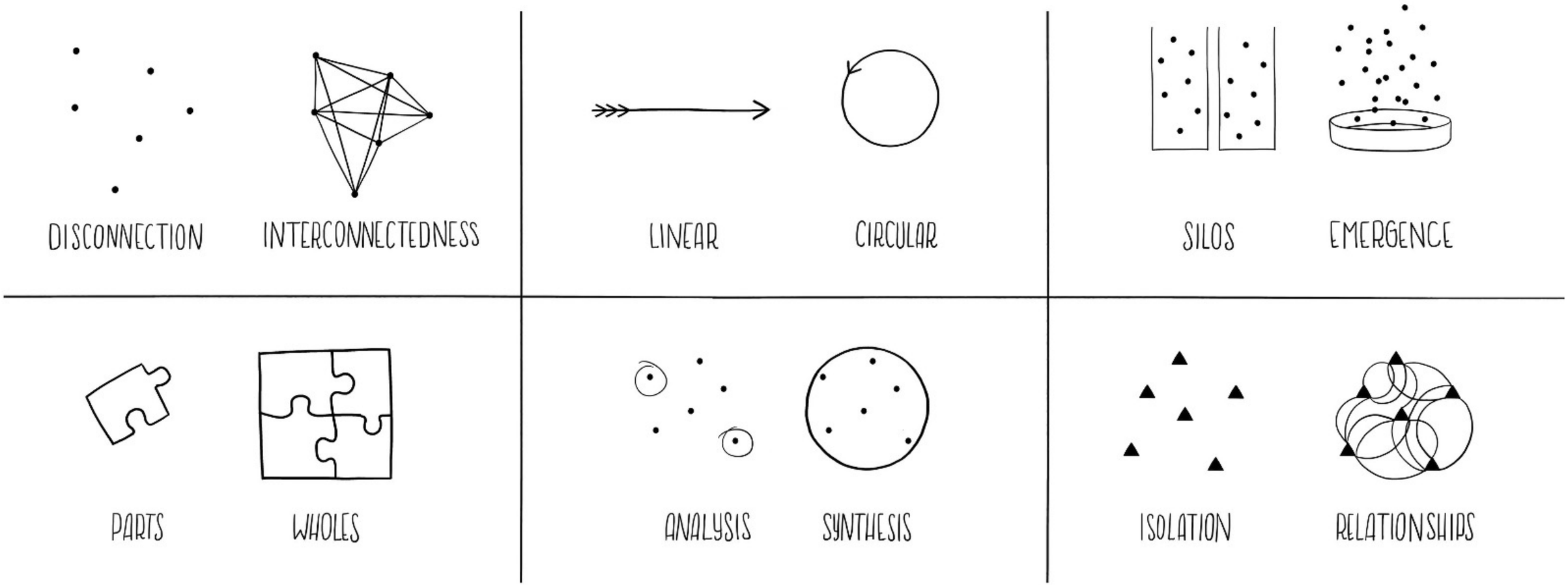
But what kind?

Systematic Cash Flow

Systematic Cash Flow Businesses Inherits the Properties of Systems

- Repeatable
- Consistent
- Reliable
- Improvable
- Measurable
- Analyzable
- Scalable
- Trainable

Properties of Systems



Evolution

“Everything is in constant flux on this earth. Nothing keeps the same unchanging shape…”

Jean-Jacques Rosseau

System Components

- Inputs
- Outputs
- Process
- **Feedback Loops**
- **Reinforcing Mechanisms**
- **Balancing Mechanisms**
- Reference Documentation

Josh Schultz
@joshuamschultz

Improvement only happens when there is feedback

9:00 AM · Jan 29, 2022

What are your feedback loops?

Components of Feedback

- Output
- Reaction
- Loop to itself
- Positive Process or Negative Process

A feedback loop is like an input, but its origin is from within the system itself, not from outside the system.

Courtney Brown from Graph Algebra

Internal Existence Implications

- Collecting Data
- Data Is stored and reviewed
- Data of certain types initiates new processes
- Those processes can create, destroy, and modify existing systems

Examples

- Quality Meetings / 8D / Root Cause
- Metric Review Meetings
- Customer Feedback & Surveys
- Employee Feedback
- Resource Review
- Bottleneck Identification
- New Opportunity

Feedback Loops start with Great Questions

- When would this break?
- How would we know?
- Where would this show up?
- What would the preferred outcome be?
- What is a generalized way to approach a fix?

Self Organizing Systems

4 Basic Ingredients

1. Strong dynamic non-linearity (ie loops & mechanisms)
2. Balance of exploration and exploitation (matrix management)
3. Multiple interactions (thresholds)
4. Available energy to overcome natural tendency (allocated resource)

Evolving systems are ever probing for adaptive fit.

Principles of Systems Science

Internal / External
Exploitation / Exploration

Questions?