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ART103

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Reading #1

Q1. -- What is a good working definition of what a System is and perhaps what it is not?

- A good working definition of what a System is a group of elements working together to achieve the same end goals, or to maintain the core values/ functions.

Examples: Solar system, Ecological system, Management Information Systems

- Collection of different components, have relationships with each other, have no connection with each other but come together,..
- Had to fit in a category, creating structures.
- NOT a system:
 - Components that stand only by itself without participating in any process or contributing anything for reaching the same goal.
 - They do not work together, and are disconnected.

Q2. -- For the 4 system definitions you were to look up please give in your own words what they mean and give an example of them for each case.

- Modularity:

Components of a system that can be arranged in a variety of configurations or roles (very interchangeable)

Ex: parts of computer, cpu, ram sticks, etc.

- Decomposability

The point at which elements cannot be broken down any further and doing so would just mean functional obliteration.

Ex: a business, chart, top is CEO -> manager -> marketing, researcher,... (Who's the boss, who is in charge.) Product management, characterize system

- Emergence

A complex behavior that arises out of a multiplicity of relatively simple interactions from many components. It's hidden but will be reviewed.

Ex: Neighborhoods, cities, towns, buildings, hormones, snowflakes.

- Chaos Theory

The behavior of dynamic systems that are highly sensitive to initial conditions and can have wide-ranging outcomes and still behave within larger systems that maintain balance. Also which is popularly referred to as the [butterfly effect](#). It cannot be explained deterministically and cannot be predicted. Many different components are at work and their interactions are so complex that extremely small variations can lead to huge differences in outcome.

Example: History, or the fact that someone is born, traffic, or just simply anyone's daily routine (the fact that I wake up in the morning and have a plan to do but meet obstacles and plan changed).

Q3 -- What is the difference between ideas of Modularity and Tessellation? What are the properties that are in opposition with each other?

- Modularity is able to break apart, flexible, variable ways to do it, can be arranged in many ways. Freely change the component within the system
- Tessellation is able to always connect and reconnect, repetition of pattern, symmetrical, well arranged, and set in a system.
- Things that tessellate: no flexibility in arrangement (fixed) Work one way only.

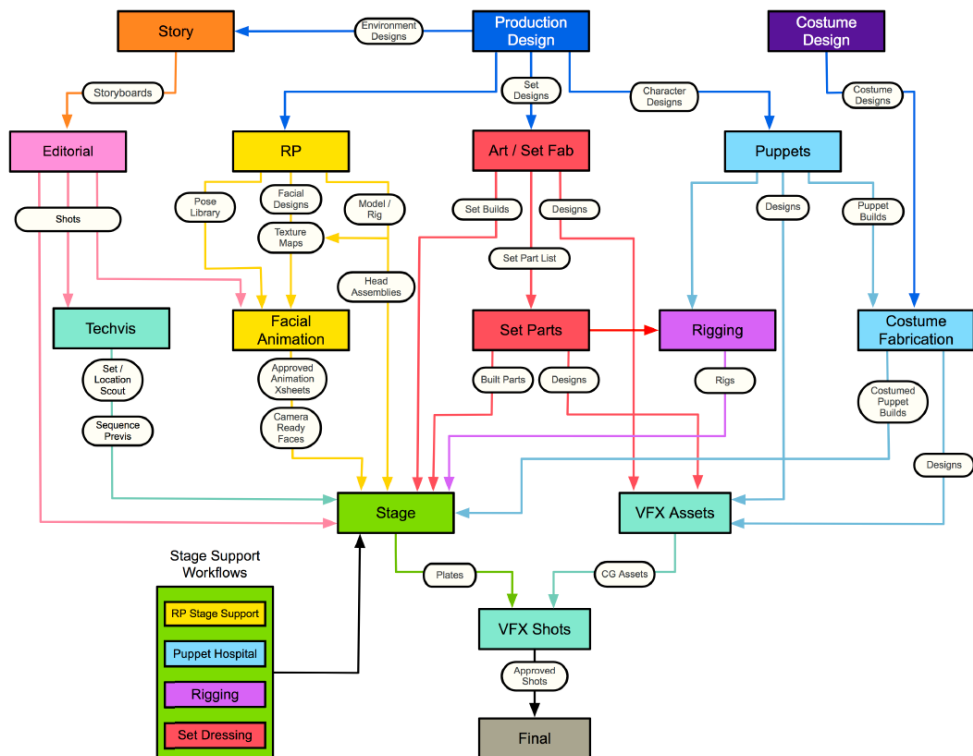
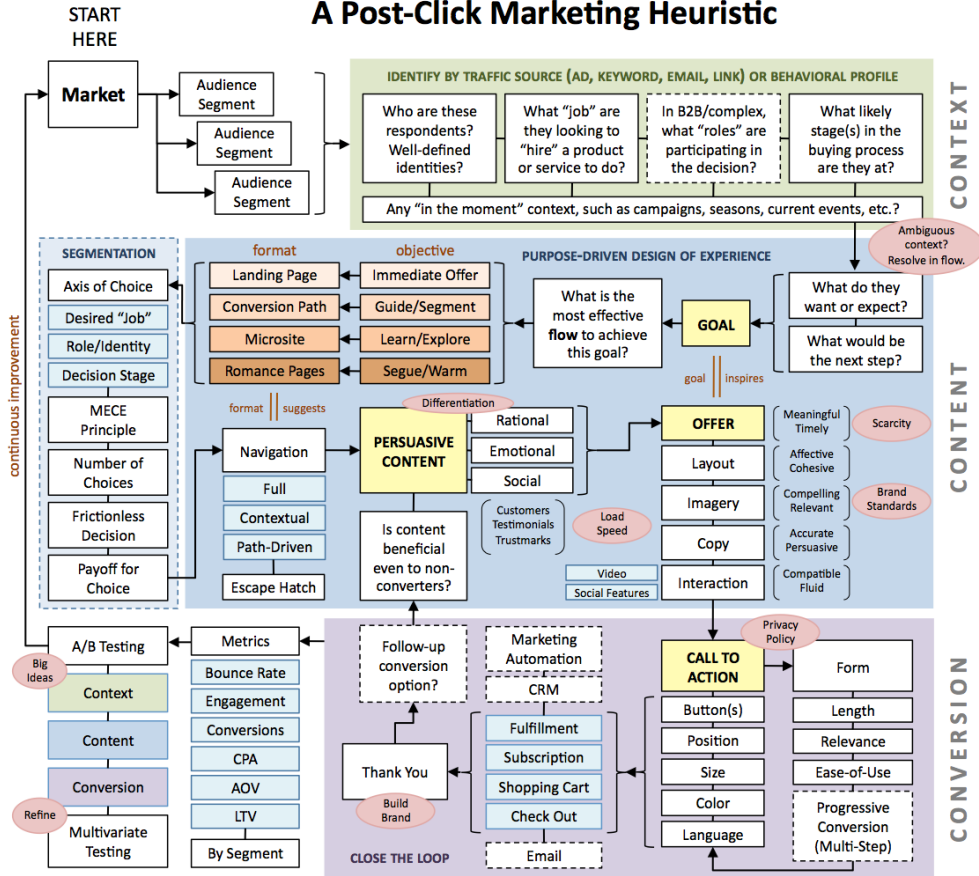
Q4 -- What is the difference between designing something that has Complexity (aperiodic) vs being Uniform (periodic)

- Complexity (aperiodic): the design will be unpredictable, patterns are made by a type of emergent behavior called complex adaptive behavior.
- Uniform (periodic): predictable and pattern that repeats the sequence of the values exactly after a fixed length of time.

Q5 -- What is the difference between a system diagram and some kind of feature diagram like an exploded view drawing or an illustration like this lady bug. Please explain in complete sentences.

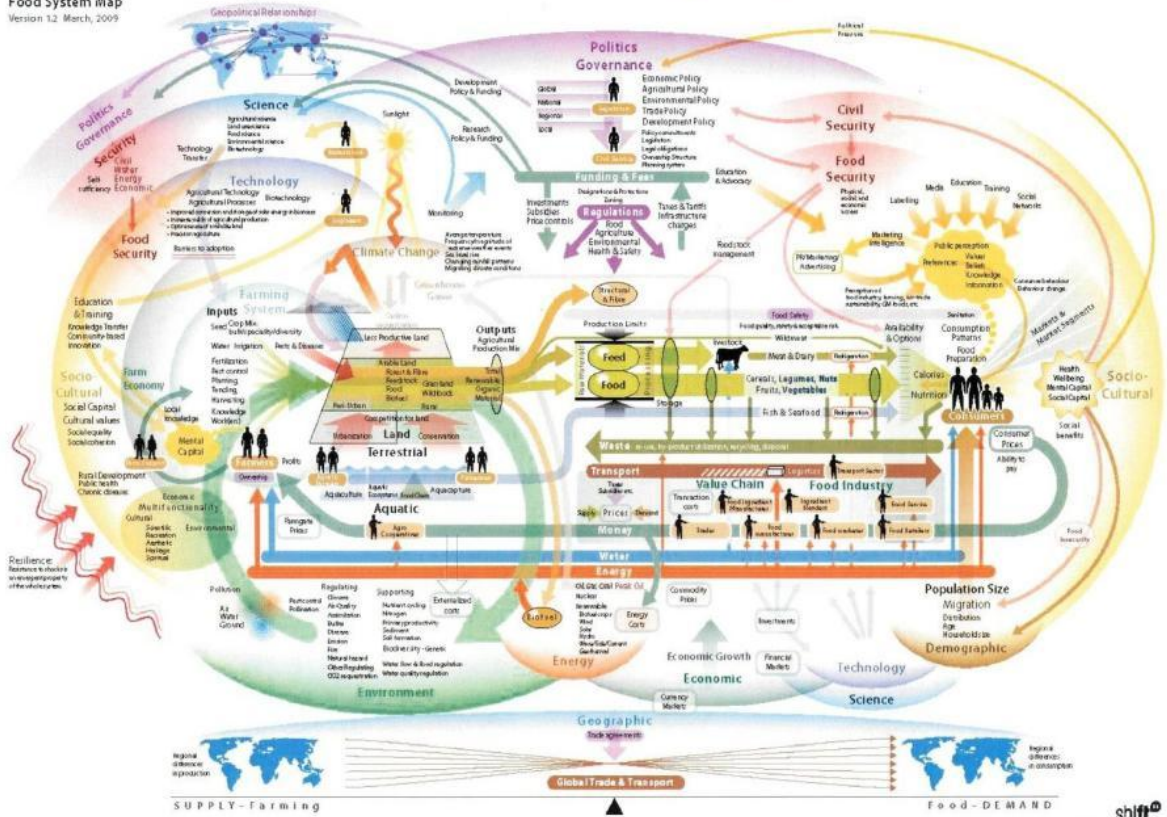
- System diagram shows the process, the connection of elements and functions of each branch, working together to finish the same goal/ task in a meaningful and functional way.
- Feature diagram shows the elements of the object, how things fit together, however it doesn't show the functionality or the connection between them.

A Post-Click Marketing Heuristic



The Global Food System

Food System Map
Version 1.2 March, 2009



Chaos theory