



*Innovation and Creativity*

A model of “the Box”

*So we know what we are trying to get out of to be  
innovative and creative*

By Timothy A. Fiscus

## *Innovation and Creativity*

### Thomas Edison

- Proven innovator
  - 1,093 patents over 63 years
    - Received patents up until the time he died
    - Averaged 17 patents a year
    - Hard work, logs and diaries

“Invention is 2% inspiration and 98% perspiration.” - Edison

Reference: Axelrod, A. (2007). *Edison on innovation: 102 lessons in creativity for business*. San Francisco: Jossey Bass.

## *Innovation and Creativity*



### Stop thinking and act like a genius

- True or false
  - Hire the oddball and put them in a lab by themselves
  - Geniuses are born not made
  - Good thing my job does not require me to be a genius
  - Geniuses are outrageously creative
  - Creativity is spontaneous
    - i.e., it just happens
  - You cannot turn it on like a light bulb unless you are Edison

Reference: Axelrod, A. (2007). *Edison on innovation: 102 lessons in creativity for business*. San Francisco: Jossey Bass.

## *Innovation and Creativity*

### ✦ Truly creative individuals have Creative Intelligence

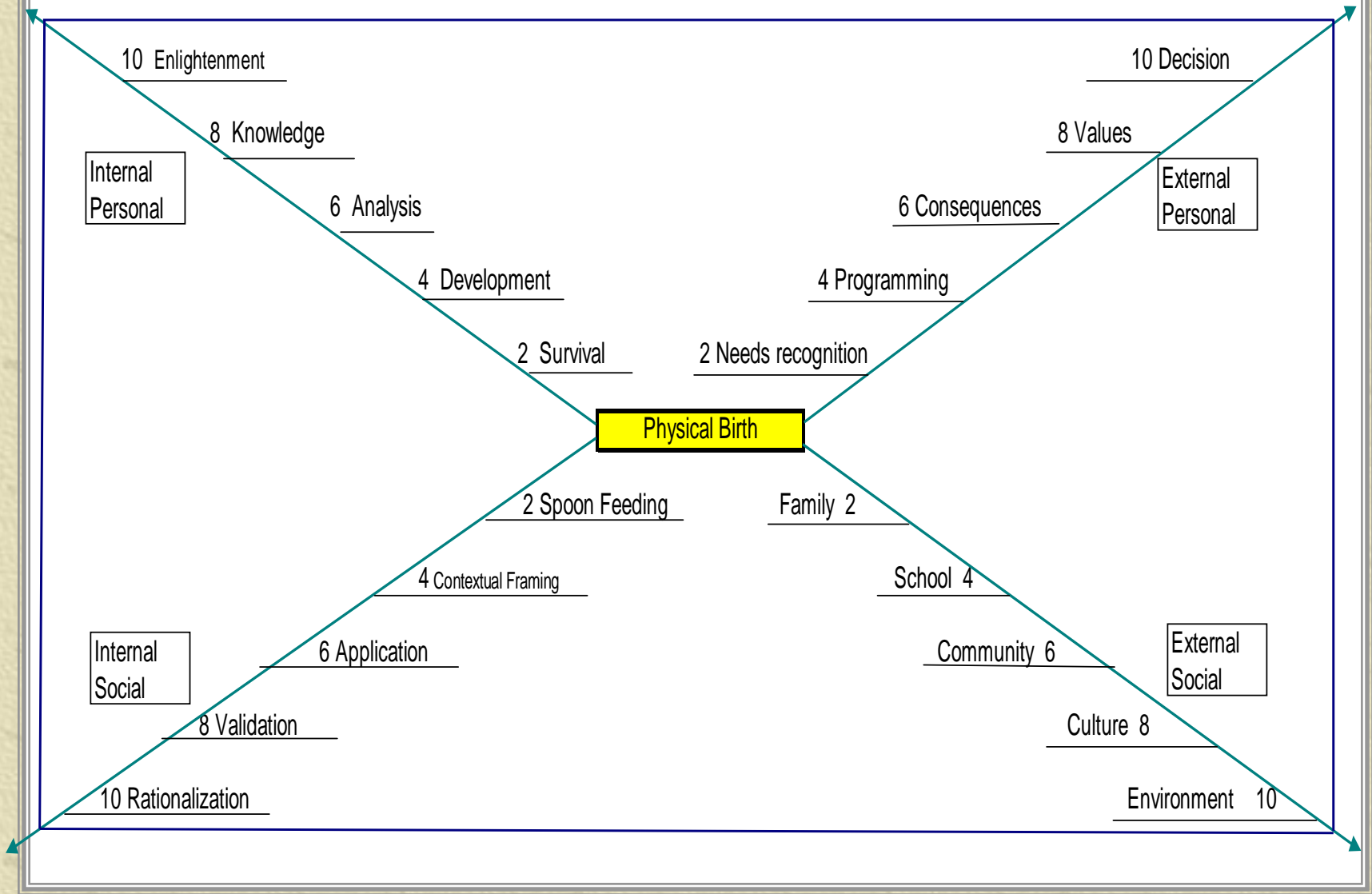
- Creative output is dependent on this
  - Willingness to change ideas
  - Willingness to try and accept failure
  - Progress success
    - DaVinci focused on process not outcome
  - Intuition and inspiration

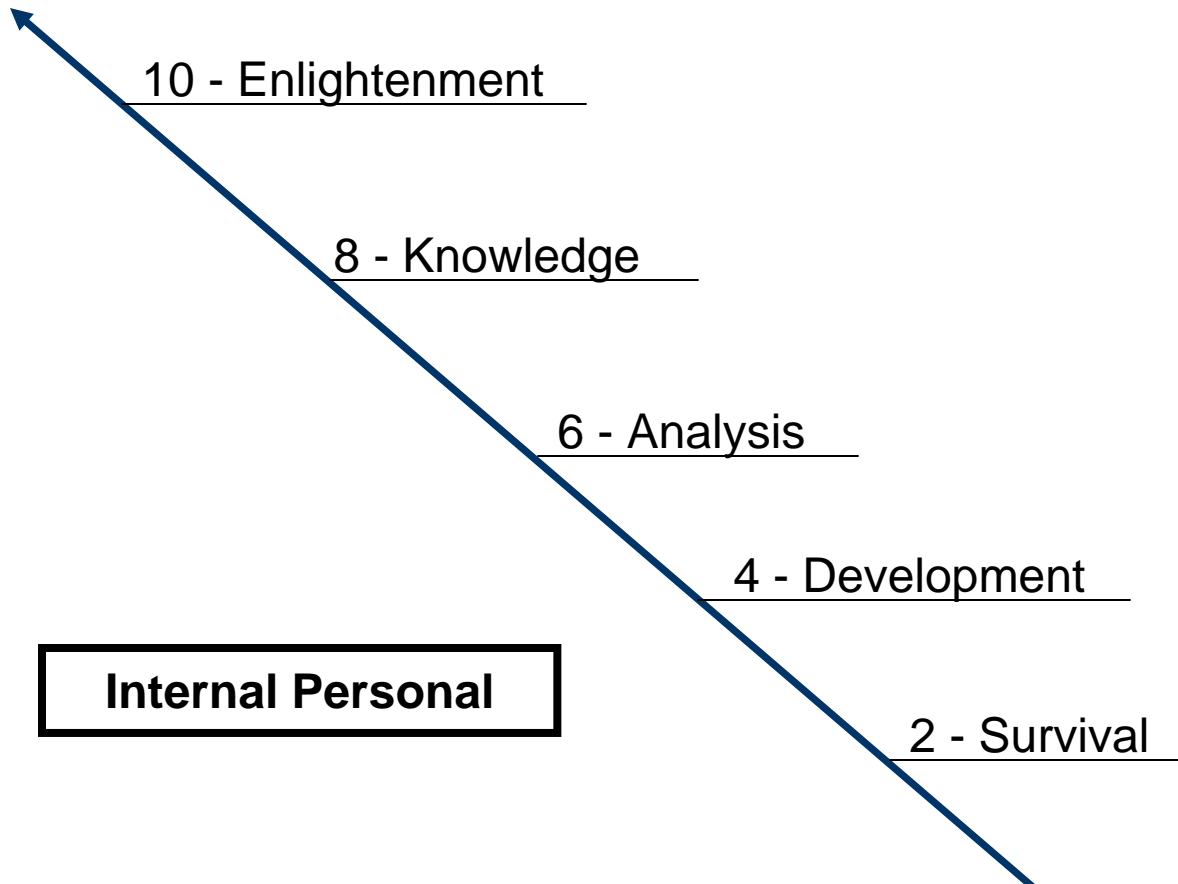
Reference: Rowe, A. (2004). *Creative intelligence: Discovering the innovative potential in ourselves and others*. New York: Prentice-Hall.

# *The Box*



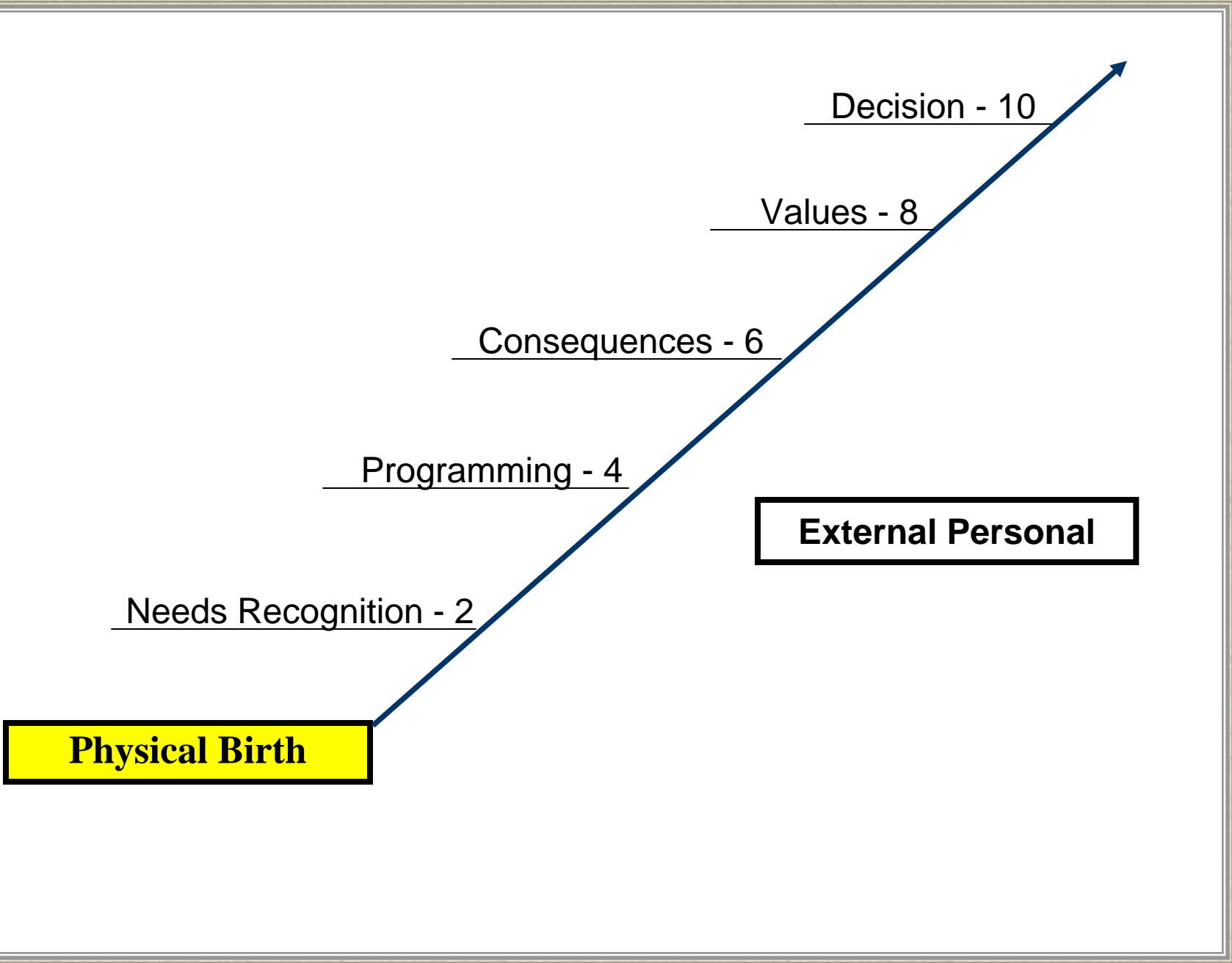
# The Box





**Internal Personal**

**Physical Birth**



**Physical Birth**

Needs Recognition - 2

Programming - 4

Consequences - 6

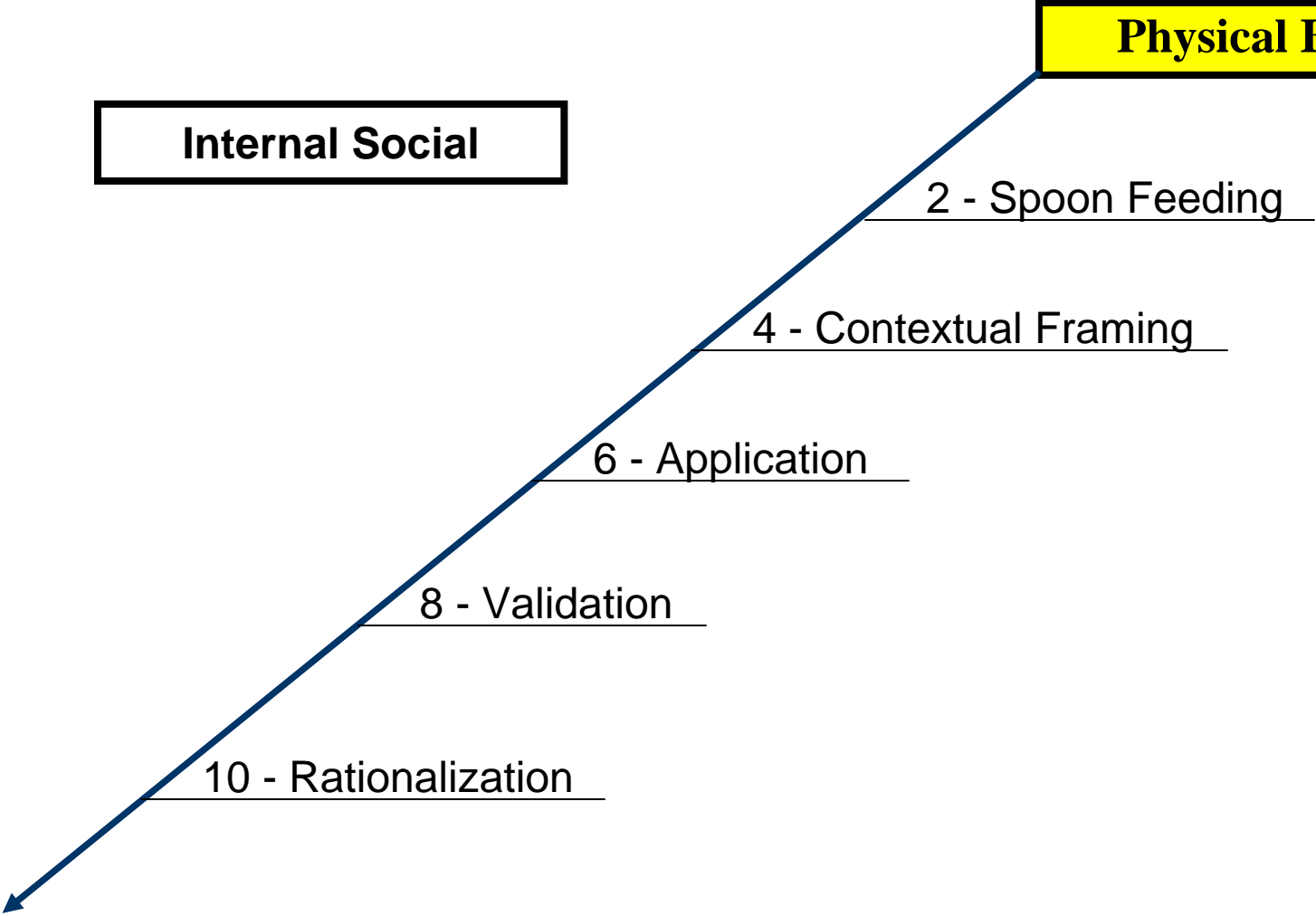
Values - 8

Decision - 10

**External Personal**

**Internal Social**

**Physical Birth**



2 - Spoon Feeding

4 - Contextual Framing

6 - Application

8 - Validation

10 - Rationalization

**Physical Birth**

Family - 2

School - 4

Community - 6

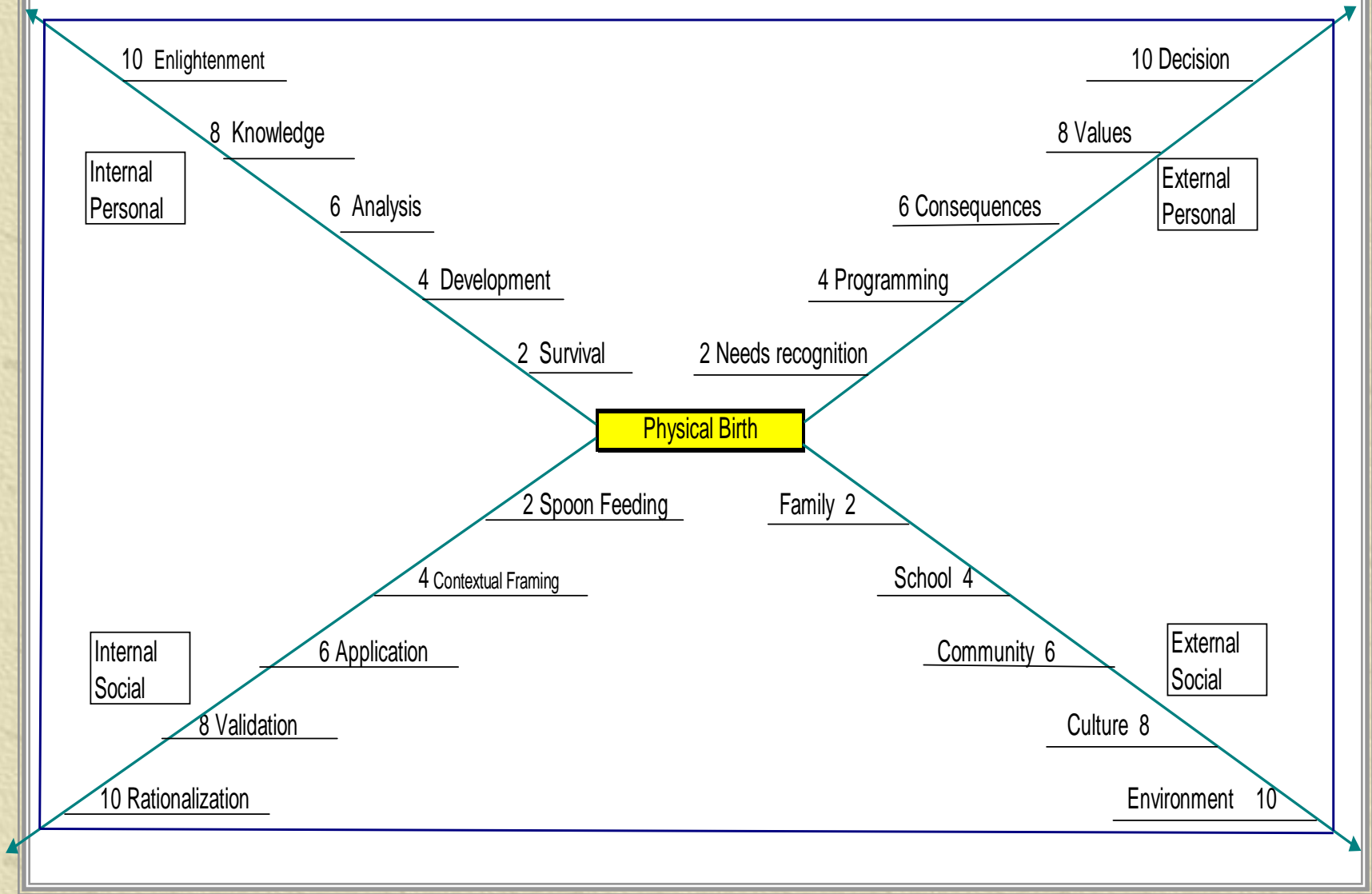
Culture - 8

Environment - 10

**External Social**



# The Box



## *Ten 'Rules for Stifling Innovation'*

1. Regard any new idea from below with suspicion because it's new, and because it's come from below
2. Insist that people who need your approval to act first go through several other levels of management to get their signatures
3. Ask departments or individuals to challenge and criticize each other's proposals (that saves you the job of deciding; you just pick the survivor)
4. Express your criticism freely, and withhold your praise (that keeps people on their toes). Let them know they can be fired at any time
5. Treat identification of problems as signs of failure, to discourage people from letting you know when something in their area isn't working

Rosabeth Moss Kanter's

## *Ten 'Rules for Stifling Innovation'*

6. Control everything carefully, make sure people count anything that can be counted, frequently
7. Make decisions to reorganize or change policies in secret, and spring them on people unexpectedly (that also keeps people on their toes)
8. Make sure that requests for information are fully justified and make sure that it is not given out to managers freely (you don't want data to fall into the wrong hands)
9. Assign to lower level managers, in the name of delegation and participation, responsibility for figuring out how to cut back, lay off, move people around, or otherwise implement threatening decisions you have made. And get them to do it quickly
10. And above all, never forget that you, the higher-ups, already know everything important about this business

Rosabeth Moss Kanter's

## *Top Ten List for Avoiding making a decision*

10. Herodotus method - "If an important decision is to be made [the Persians] discuss the question when they are drunk and the following day the master of the house...submits their decision for reconsideration when they are sober. If they still approve it, it is adopted; if not, it is abandoned. Conversely, any decision they make when they are sober is reconsidered afterwards when they are drunk."

## *Top Ten List for Avoiding making a decision*

9. Recourse to someone or even something else -  
Examples are astrology (not astronomy which is a science), palm readings, looking up at stars, dialing 1-900 psychic friends
8. False hopes - Hoping for something to happen over which we have no control over its outcome. For example, hoping your airplane lands safely while you are just a passenger and not the pilot of the plane.

## *Top Ten List for Avoiding making a decision*

7. Do not think about it - The decision-makers who are waiting for something to turn up
6. Do anchoring - Give disproportional weights to some information instead of waiting as long as possible, to have all the information.
5. Sunk-cost conscious - Repeat the same decision because "you have invested so much in this approach (or your current job) that you cannot abandon it or make another decision

## *Top Ten List for Avoiding making a decision*

4. Failure to reflect on the problem -  
Reflection before action is often resisted by some managers.
3. Look for confirming-evidence - Seek out the information to support an existing pre-selection and discount opposing ones.

## *Top Ten List for Avoiding making a decision*

2. Pray for a miracle - Whatever we pray for, we pray for a miracle. Every prayer reduces itself to this: "Great God, grant that twice two be not four."
1. Pass the buck - Pass off responsibility of making the decision to someone

Ref; [www.ubalt.edu](http://www.ubalt.edu)

## *Improving decision making around innovative ideas*

- ✦ Keep in mind there are there are no guarantees
- ✦ Use a fault tree to invalidate a hypothesis
- ✦ Rooting out an innovative idea is a balance between quantity and quality of ideas

## *Improving decision making around innovative ideas*

- ✦ Brainstorm all possible hypothesis
- ✦ List evidence for and against
- ✦ Delete analysis of no value
- ✦ Create a score card around your organization's decision model
- ✦ List critical scenario dependencies for success
- ✦ Do a probability hypothesis

## *Improving decision making around innovative ideas*

- ✦ Correlation does not equal causation
- ✦ Correlation may be better than speculation
- ✦ Speculation may be needed to hit a home run

# *Yale University Probability Chart*

100% -- certainly

93% give or take 6% -- almost certainly

75% give or take about 12% -- probably

50% give or take about 10% -- chances about even

30% give or take about 10% -- probably not

7% give or take about 5% -- almost certainly not

0% -- impossible

Where do decisions around innovation land?

# *Probability - Risk in the Decision*

$$.80 \times .80 \times .80 \times .07 = 3.584\%$$

What is the go/no-go point?