

# Water Diplomacy: An Experiment in Interdisciplinary Education

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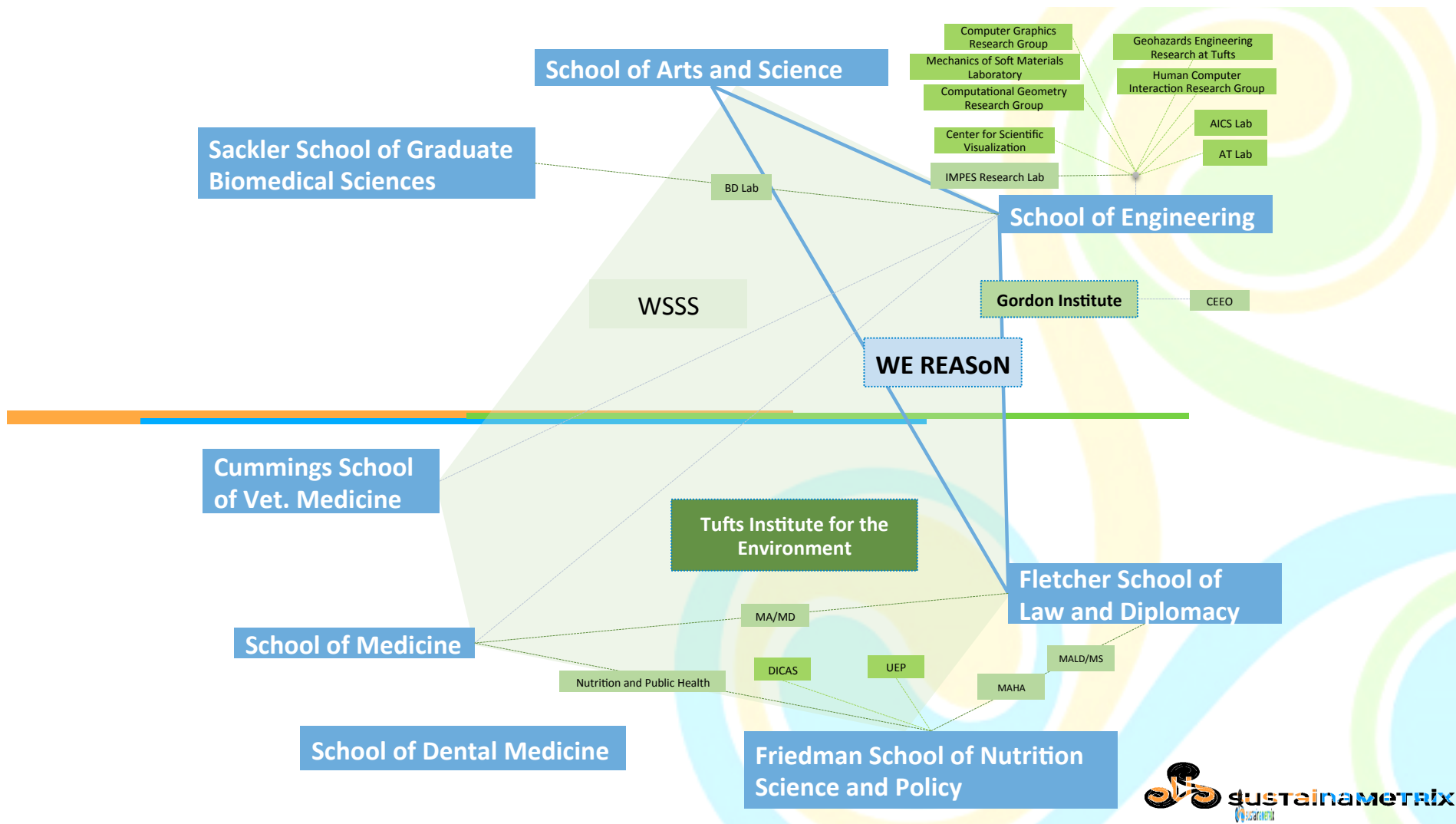
SATURDAY, MAY 13, 2017  
TUFTS UNIVERSITY, WATER DIPLOMACY ROUNDTABLE  
GLENN G. PAGE, PRINCIPAL/CEO SUSTAINAMETRIX

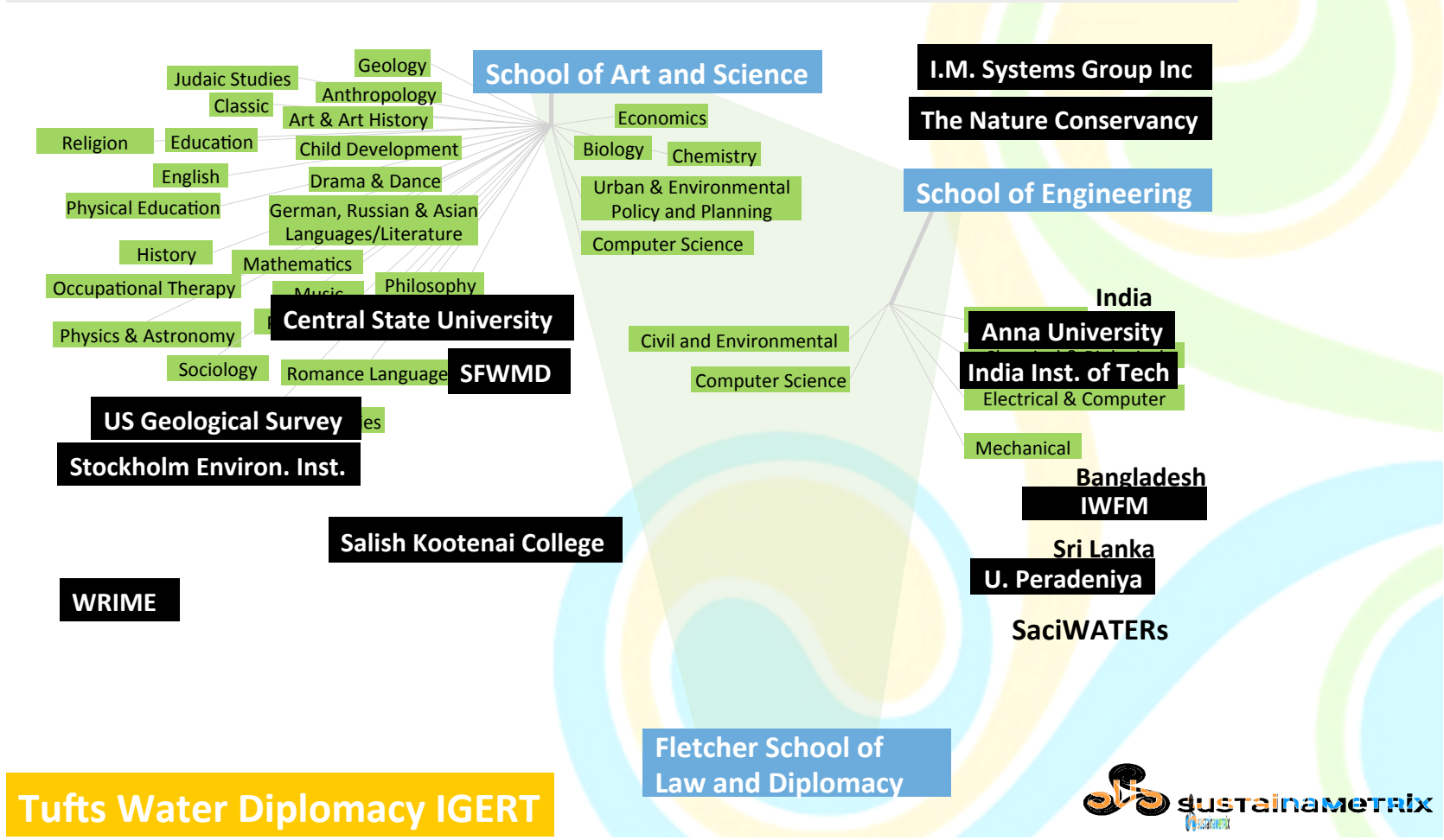
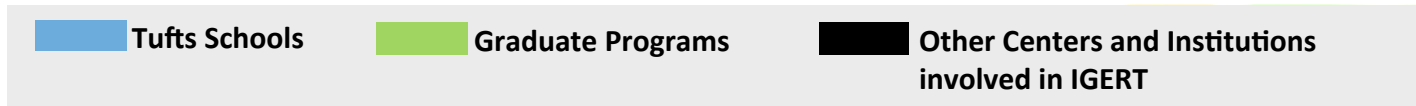


# Tufts University Water Diplomacy IGERT Program

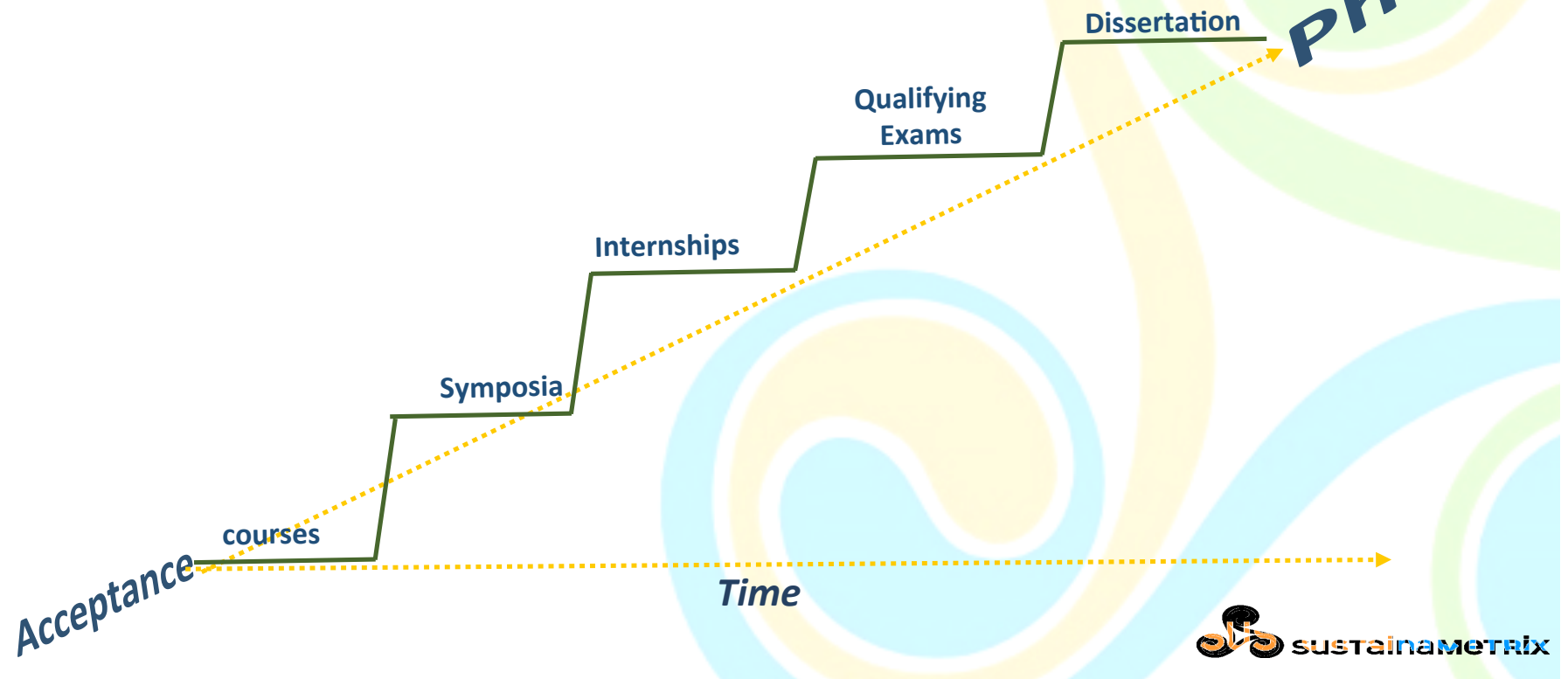
## DRAFT SYSTEM MAP



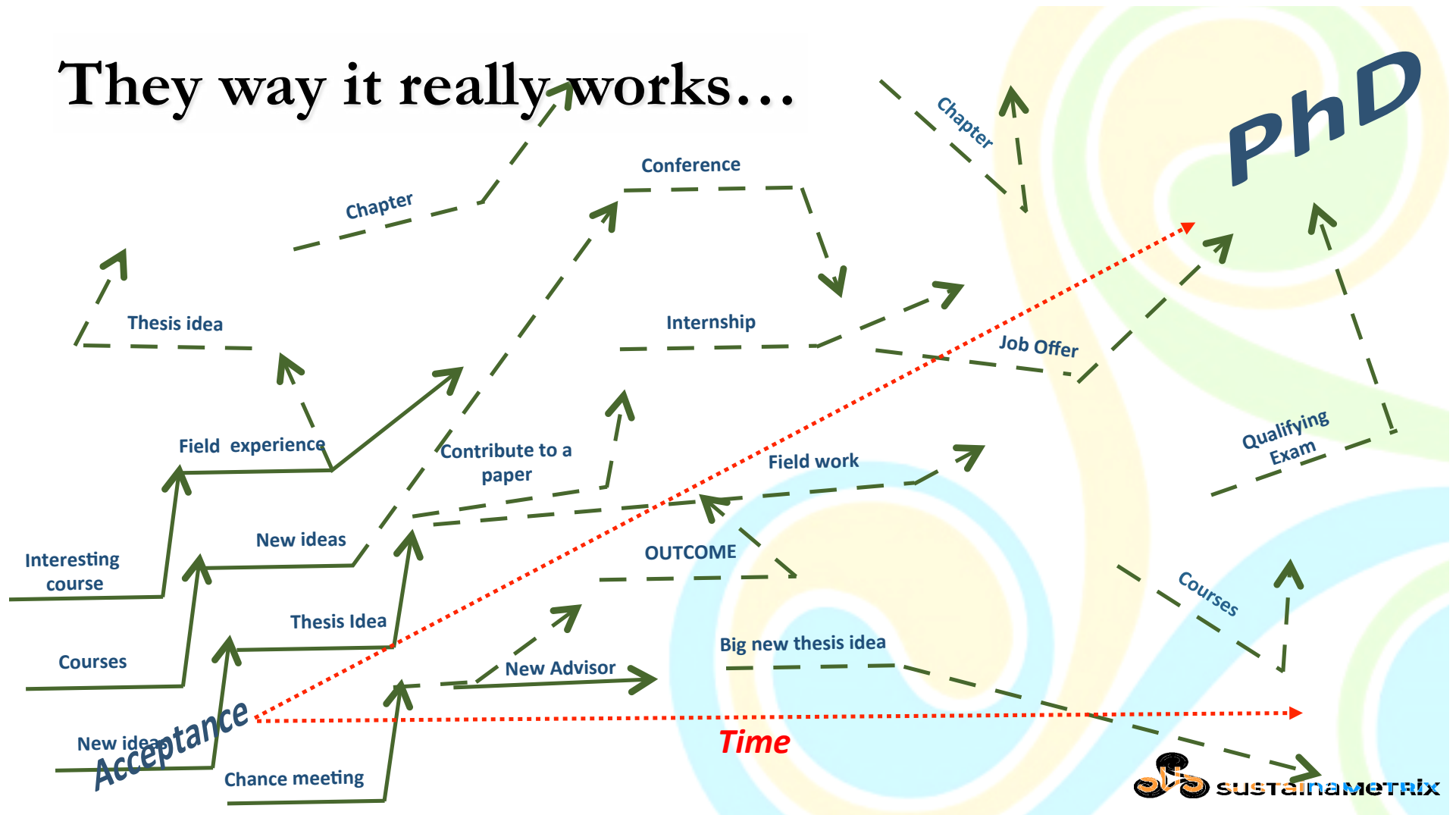




The way we think an interdisciplinary graduate program should play out...



# The way it really works...



## TRIPLE LOOP LEARNING

What underpins and guides our thinking, learning and adaptation?

### Guiding Question

- How do we See our Seeing?
- How do we establish “**Rightness**”?

## DOUBLE LOOP LEARNING

Are we focused on the right issues that will transform water diplomacy?

### Guiding Question

Are we doing the **right** things?

## SINGLE LOOP LEARNING

Did we attract good students  
And are they graduating?

### Guiding Question

Are we doing things **right**?

Campaign

efficiency

Goals

*Values, Principles  
that underpin behavior*

### CRITICAL VALUES

PATTERNS  
POWER  
EXPERTISE  
LEGITIMACY  
WORLDVIEWS

### INTRINSIC VALUES

RELEVANCE  
EFFECTIVENESS

## 3 Modes of Integrated Learning

# What does it all mean and when does it happen?

- **Disciplinary**
- **Multidisciplinary**
- **Interdisciplinary**
- **Transdisciplinary/Consilience**



# What does it all mean and when does it happen?

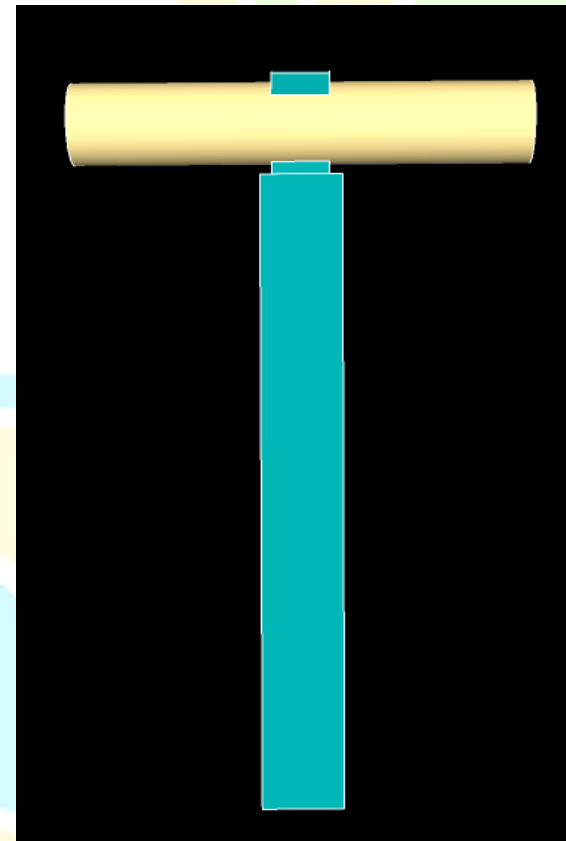
- **Disciplinary**
- **Multidisciplinary**
- **Interdisciplinary**
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Principled  
Pragmatists

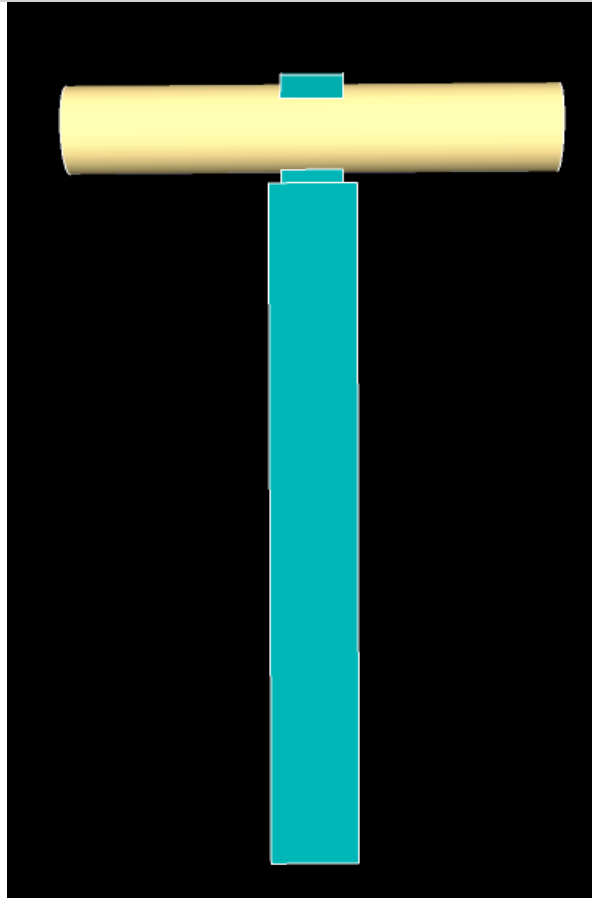
# TRANSFORMATIVE SCHOLARS/LEADERS

## Leaders of the future will require:

- In-depth knowledge of a at least one academic discipline (the depth)
- Integrating knowledge, skills and values (the breadth) that enable productive engagement with
  - Complex systems
  - Wide range of stakeholders
  - Interdisciplinary teams



# TRANSFORMATIVE LEADERS MUST HAVE BREADTH



A water diplomat facilitates the process of resolving water conflicts by finding creative sustainable options that improve mutual gains.

# The “T” Exercise

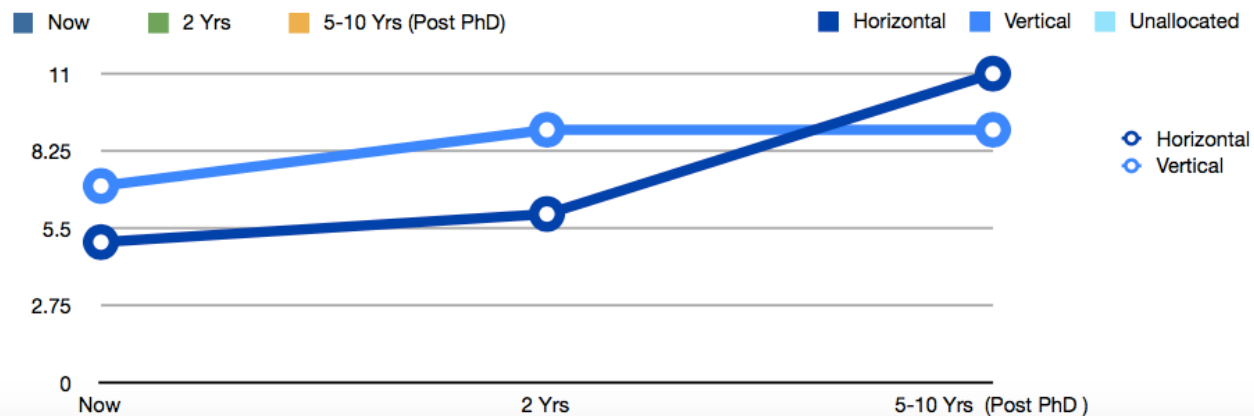
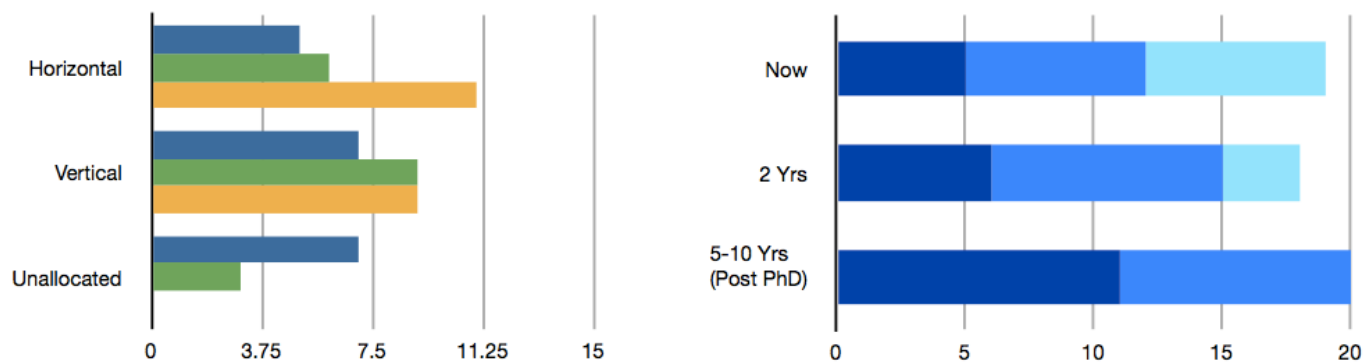
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- Divide intellectual focus of your career into 20 “Blocks”
- As you enter the program allocate what you consider to be your current breadth and depth – with an assumption there will be blocks left over
- Define how this relationship will develop over the next 2 years as part of the IGERT – with an assumption there will be blocks left over
- Define how this relationship will look in 5-10 years post PhD – with the assumption that all blocks are used

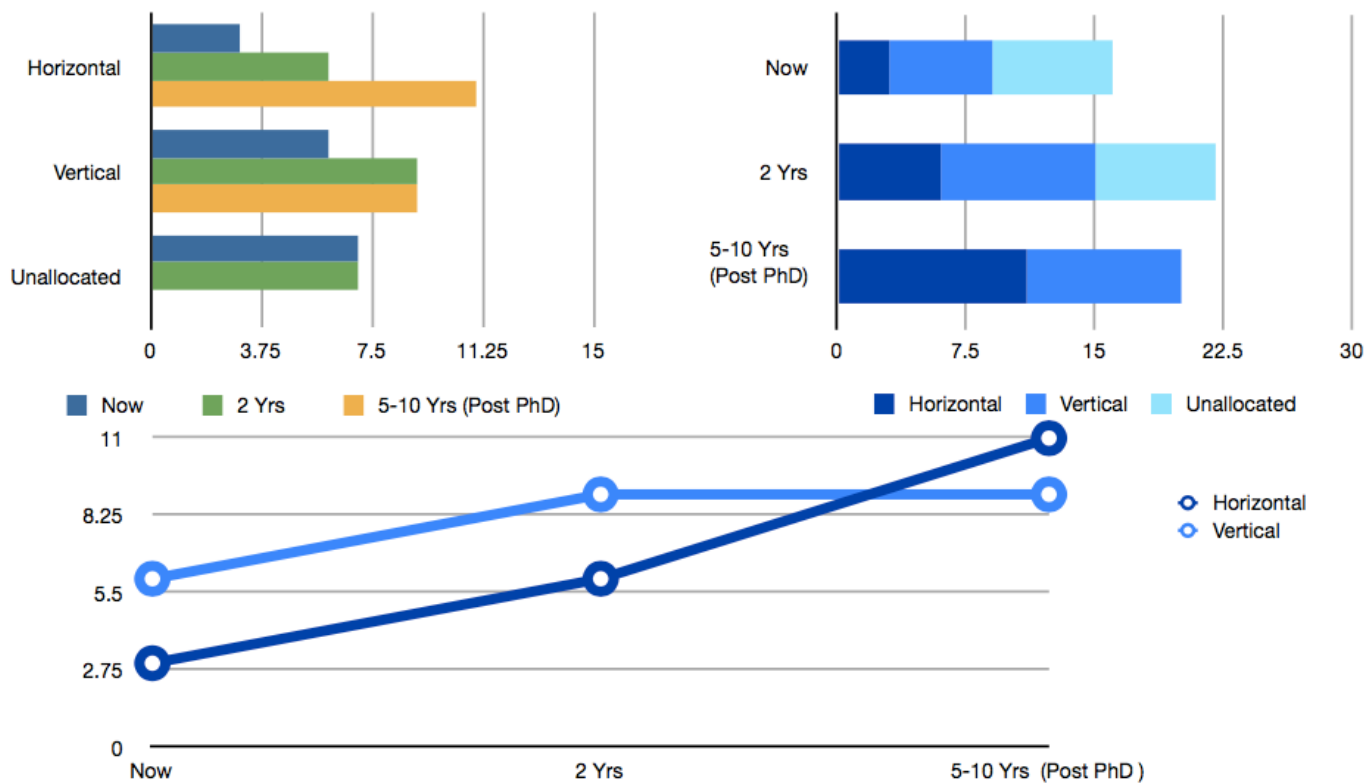
# THE DATA: HOW WE SEE THEIR “T”

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	Now	2 Yrs	5-10 Yrs (Post PhD)	$\Delta$ H/V (IGERT Program)	$\Delta$ H/V (Post Ph.D)	Target Growth
<b>Horizontal</b>	5	6	11	1	5	6
<b>Vertical</b>	7	9	9	2	0	2
<b>Unallocated</b>	7	3	0			
H/V	0.71	0.67	1.22	-0.05	0.51	

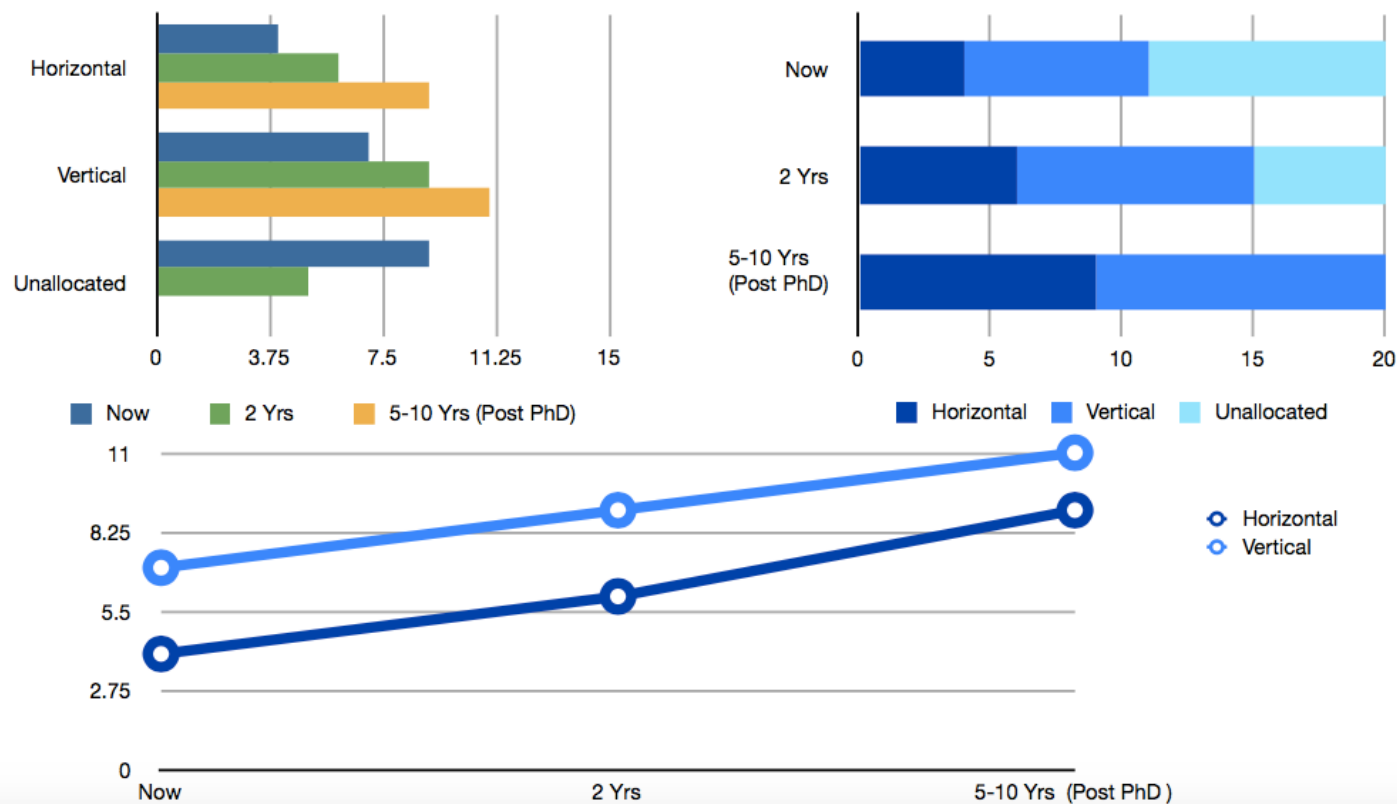


	Now	2 Yrs	5-10 Yrs (Post PhD)	$\Delta$ H/V (IGERT Program)	$\Delta$ H/V (Post Ph.D)	Target Growth
<b>Horizontal</b>	3	6	11	3	5	8
<b>Vertical</b>	6	9	9	3	0	3
<b>Unallocated</b>	7	7	0			
<b>H/V</b>	0.50	0.67	1.22	0.17	0.72	





	Now	2 Yrs	5-10 Yrs (Post PhD)	$\Delta$ H/V (IGERT Program)	$\Delta$ H/V (Post Ph.D)	Target Growth
<b>Horizontal</b>	4	6	9	2	3	5
<b>Vertical</b>	7	9	11	2	2	4
<b>Unallocated</b>	9	5	0			
H/V	0.57	0.67	0.82	0.10	0.25	

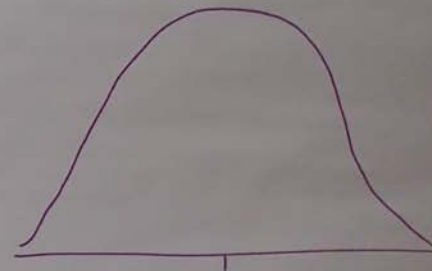
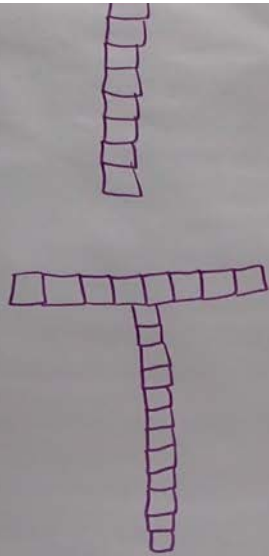


## THE IMAGES: HOW THEY SEE THEIR “T”

5-10 yrs.  
(After grad.)

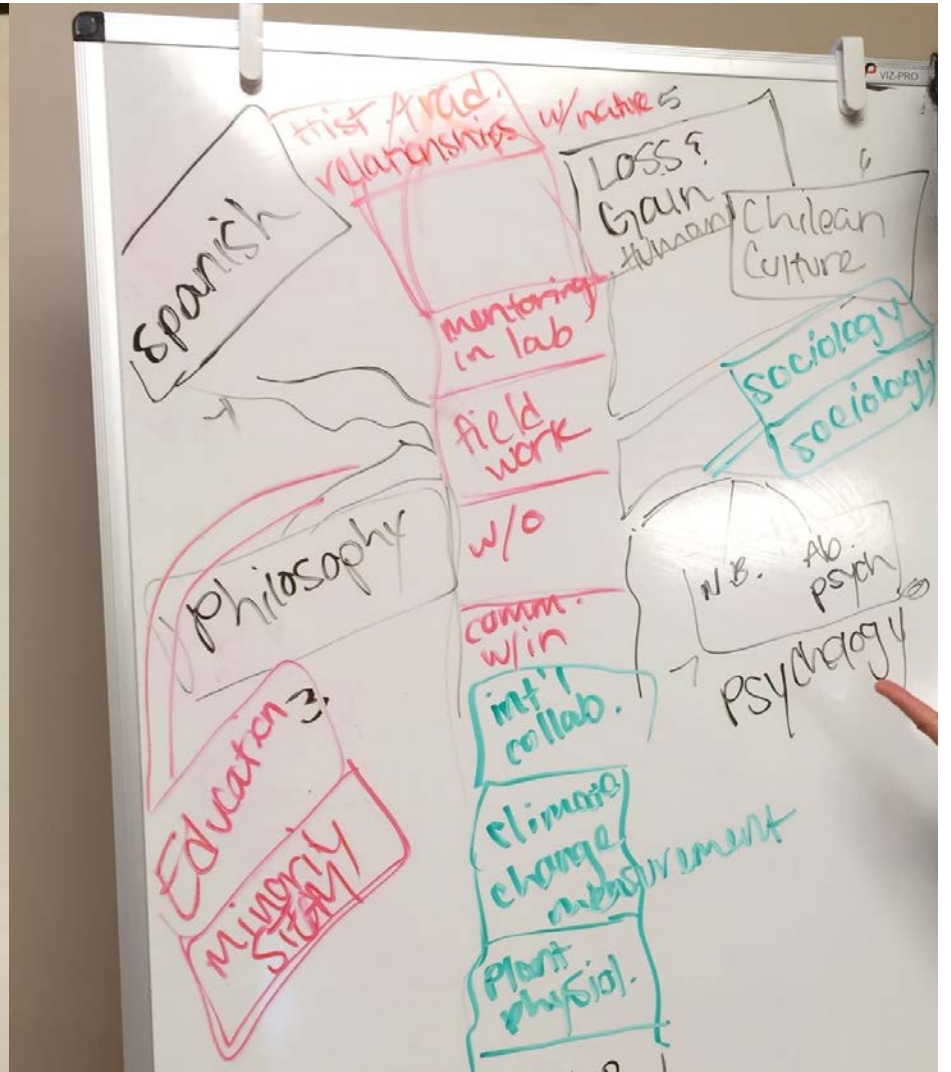
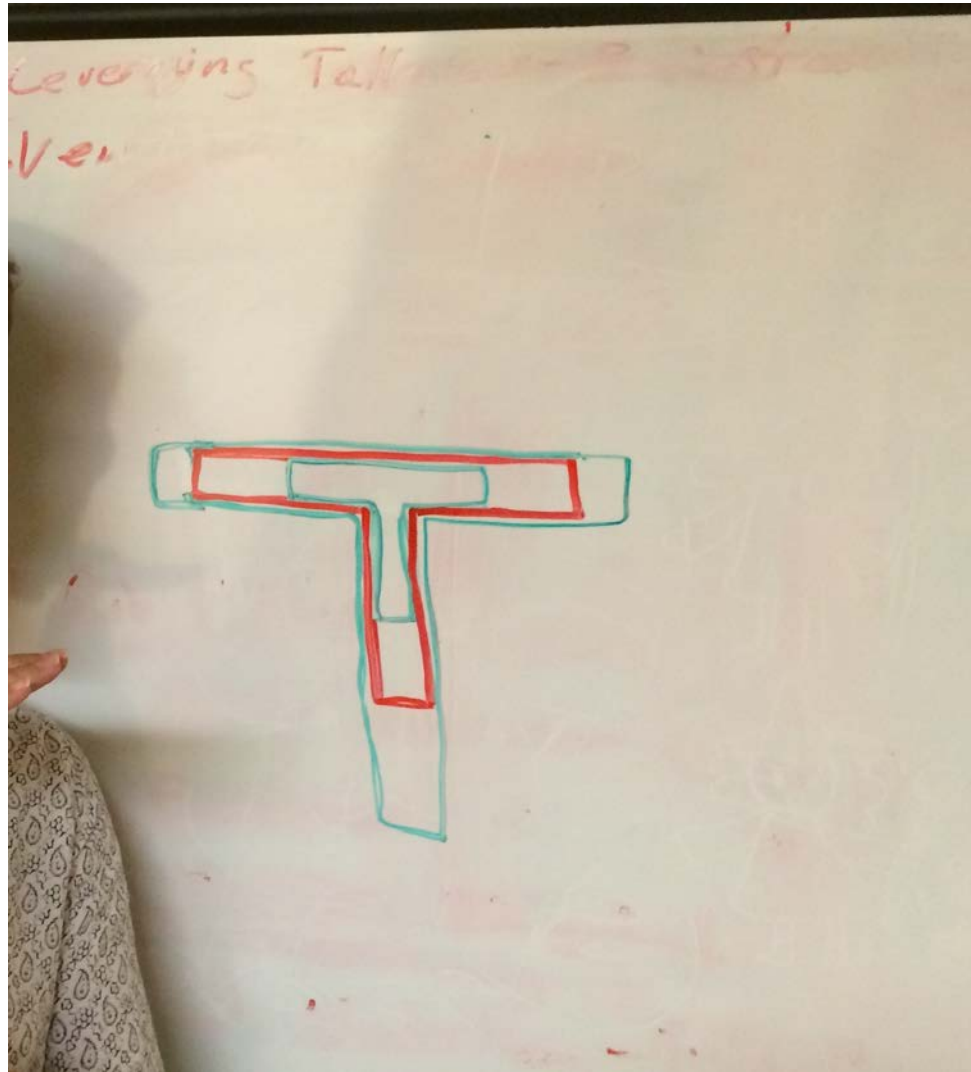
12D  
8B

"T" model



Frequency distribution  
model



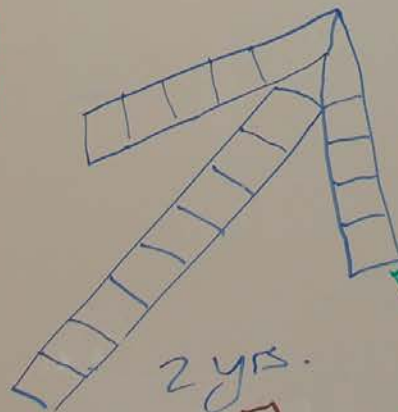




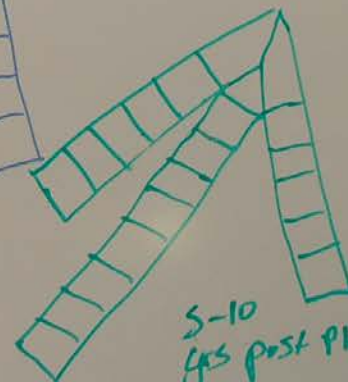
# Andy T.'s Model T



☐ UN ☐ ALL ☐  
OLATED

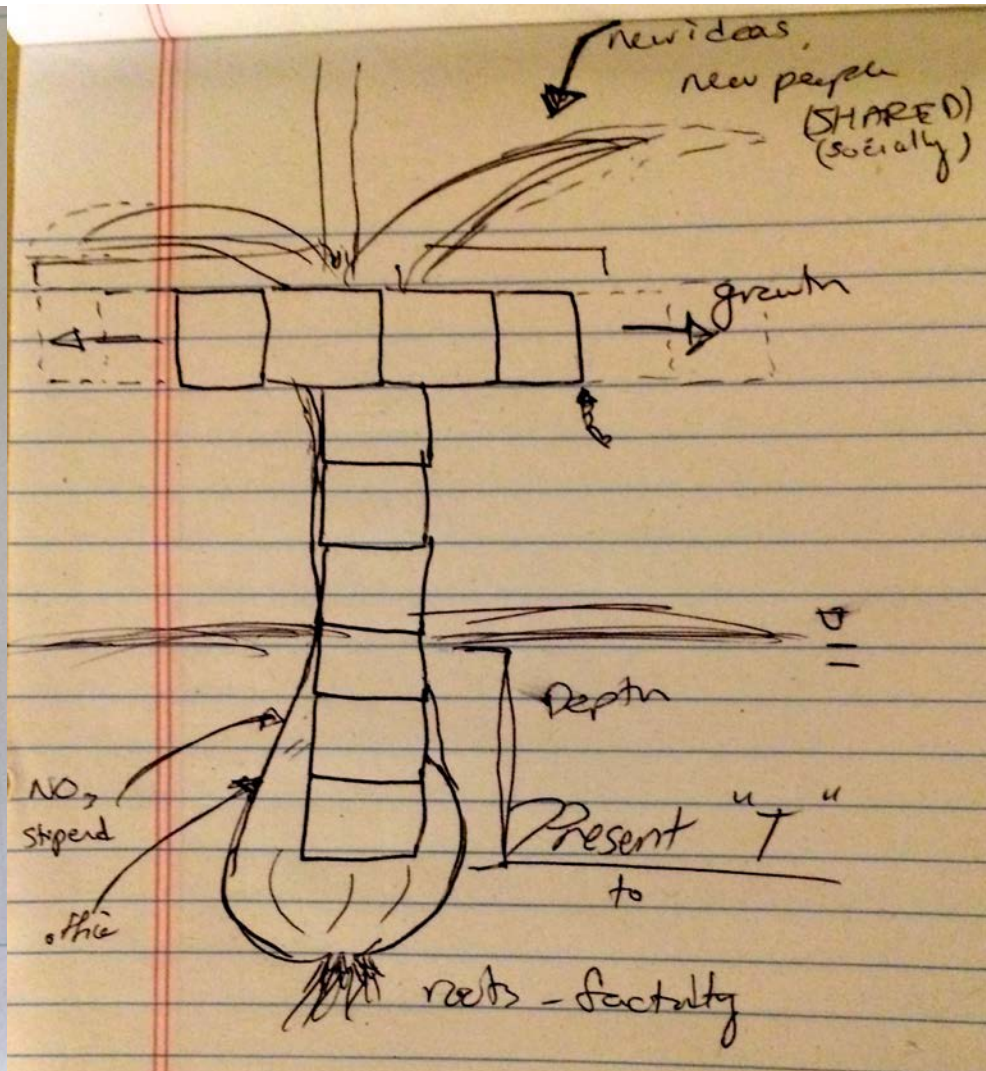
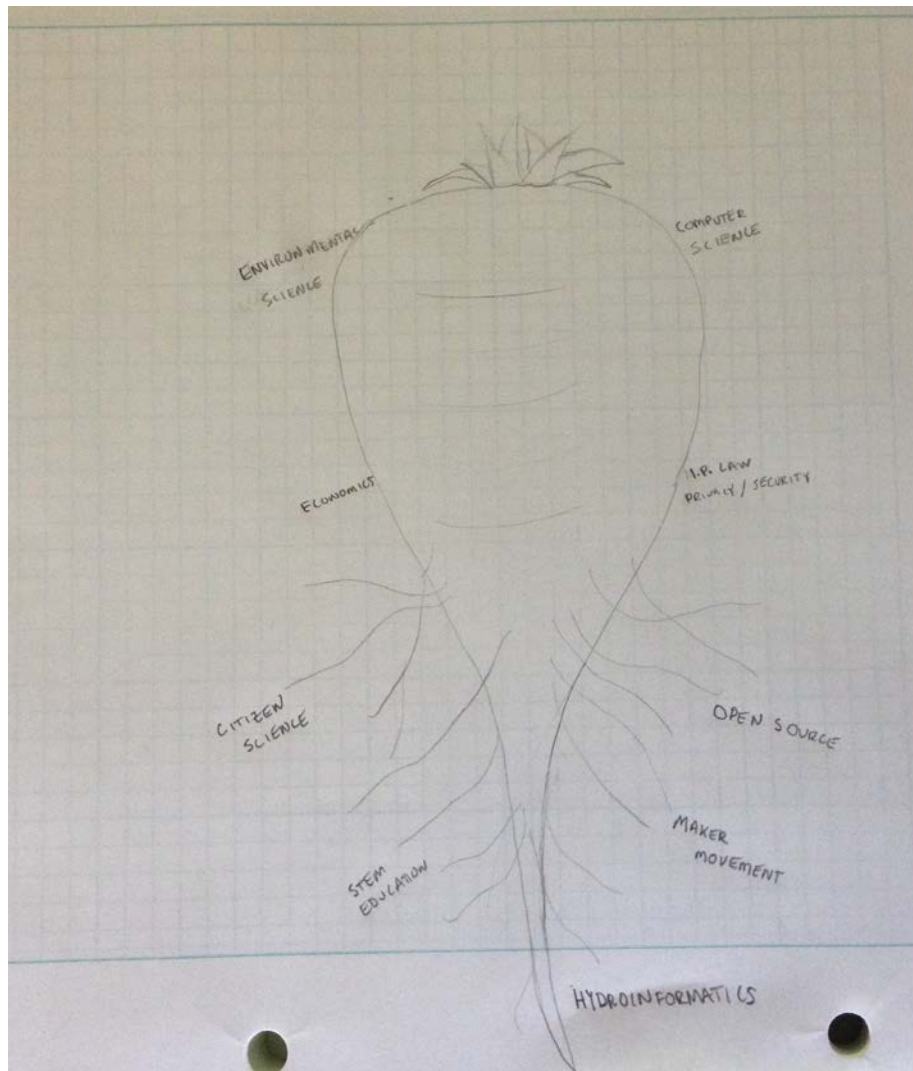


2 yrs.

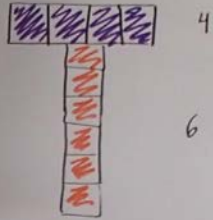


5-10  
yrs post PhD

Full  
Potential



PRESENT



2 YEARS

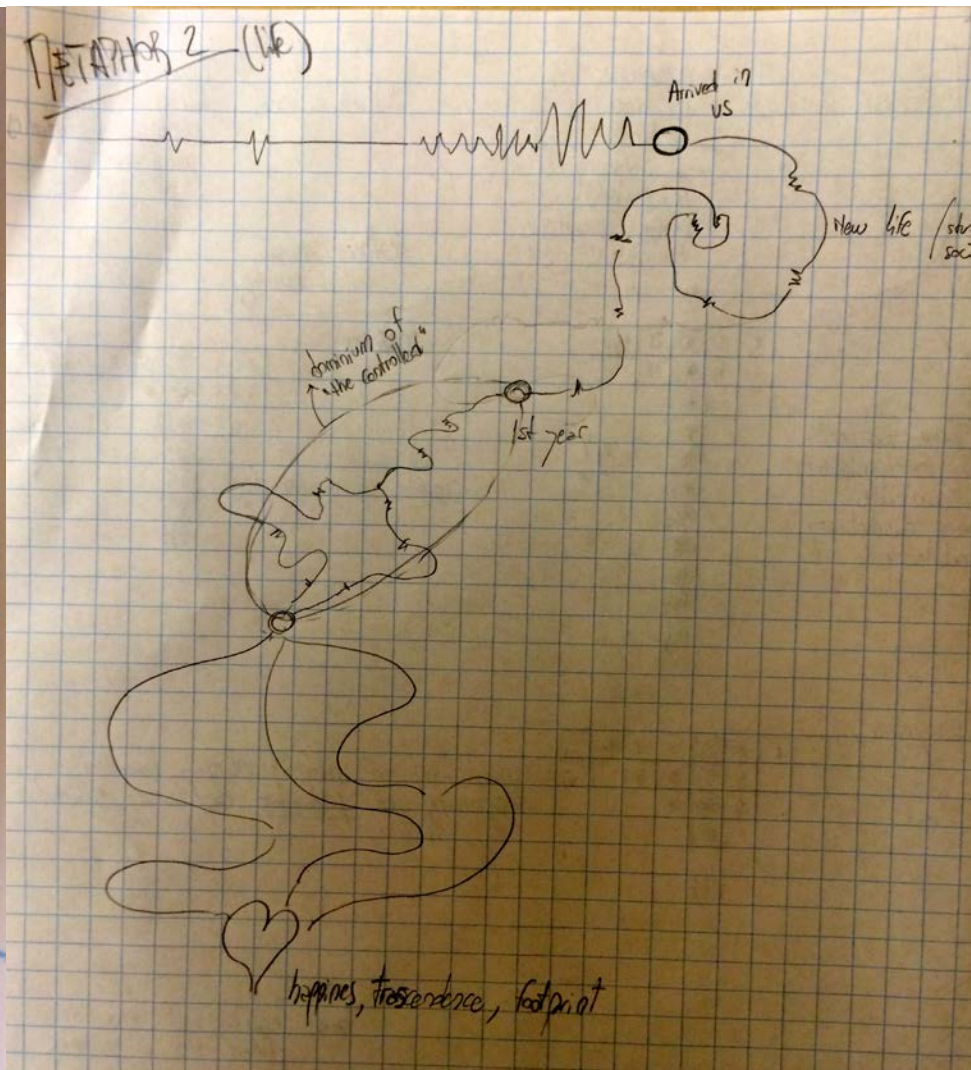
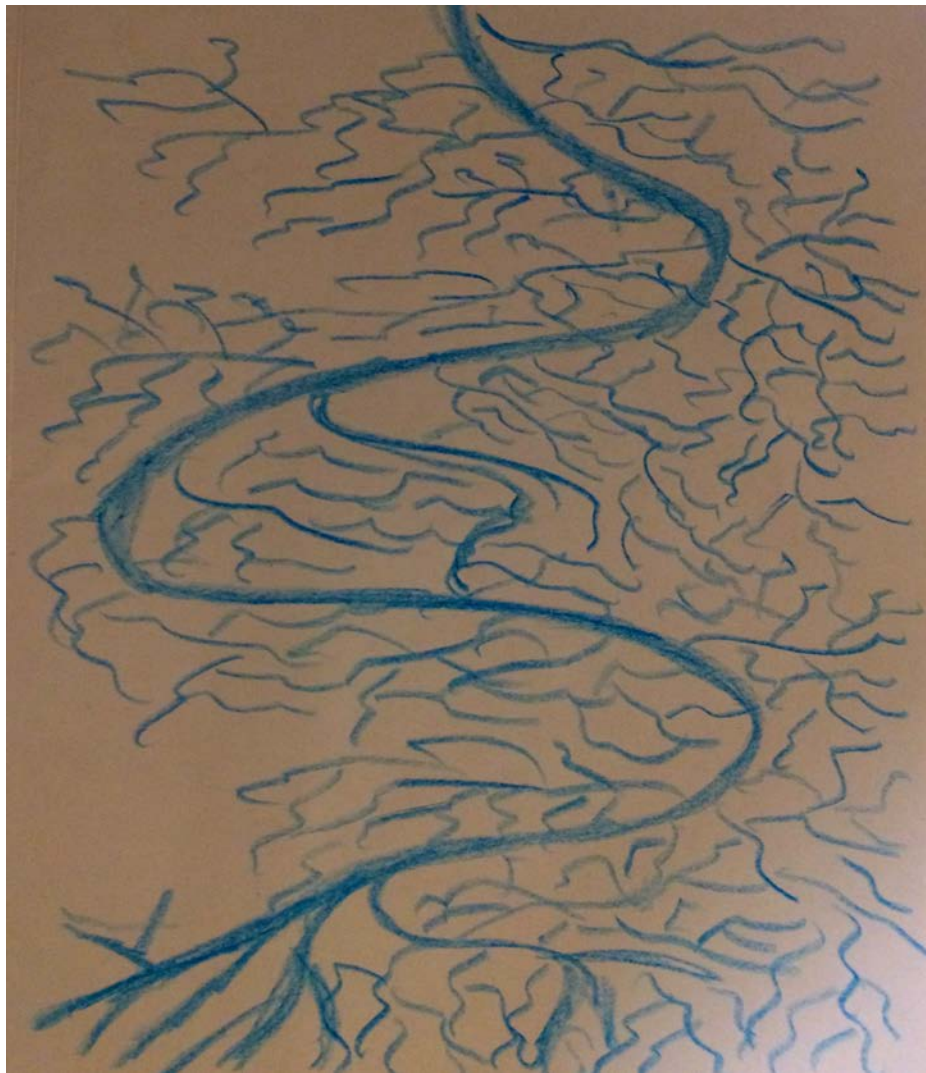


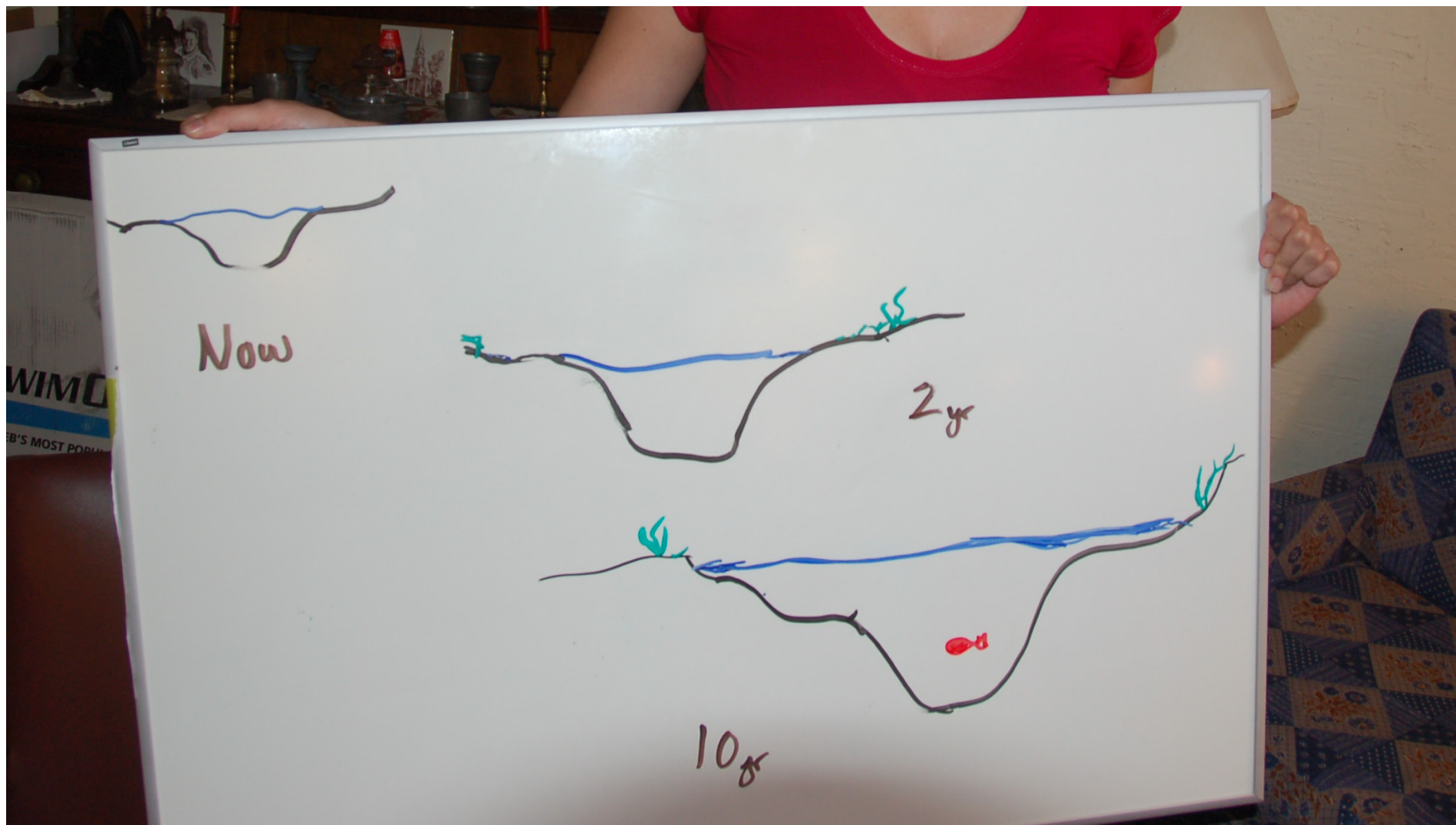
5-10 years



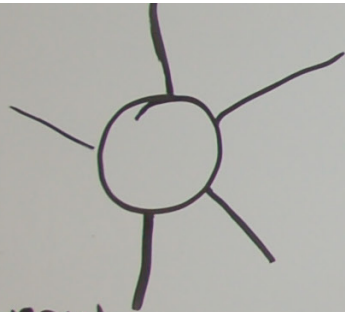
10 : 10



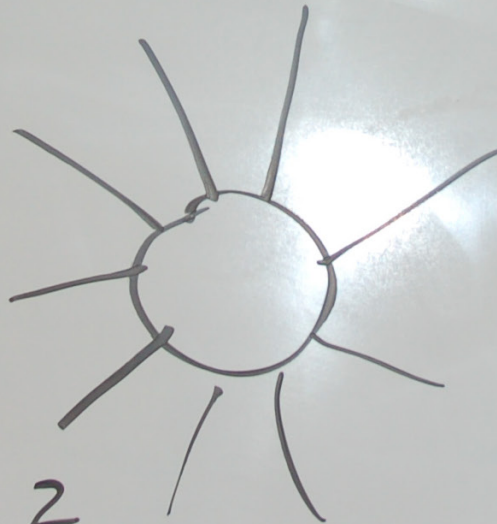








now



2



5-10

