

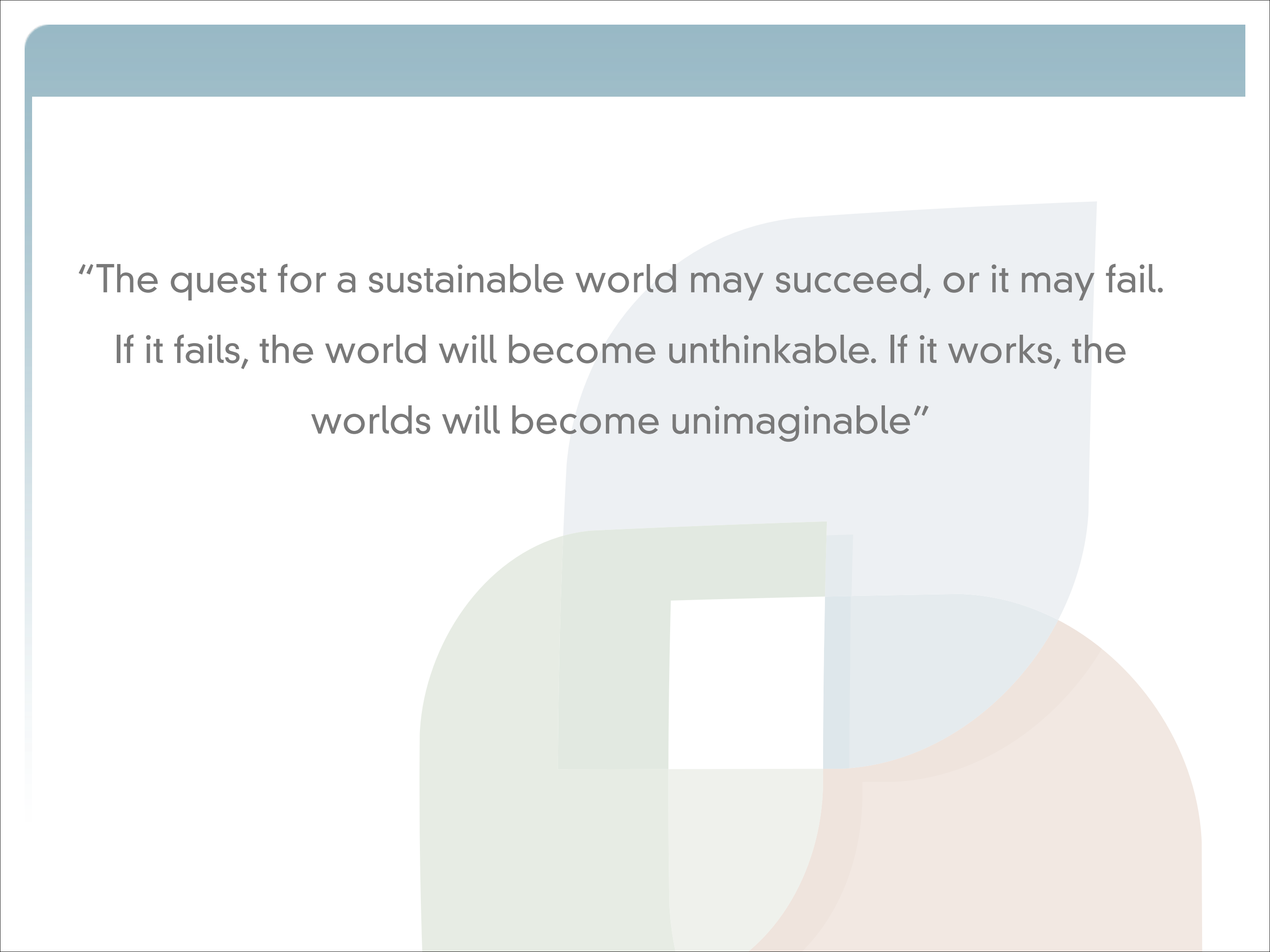
User Interaction: How does human-object interaction change with techno-culture

Asst. Professor Donald J. Patterson
INF 133 Fall 2012



The image features a solid teal header bar at the top. Below it, the background is white with three large, semi-transparent, overlapping shapes: a light blue shape at the top right, a light green shape at the bottom left, and a light orange shape at the bottom right. The word "Review" is centered in the white space between the blue and green shapes.

Review



“The quest for a sustainable world may succeed, or it may fail.
If it fails, the world will become unthinkable. If it works, the
worlds will become unimaginable”



“Effective intervention takes place not in the human, not in the object but in the realm of the techno-social”

OBJECT TECHNOSOCIAL EPOCHS PEOPLE

LINE OF EMPIRE ARTIFACT

HUNTERS AND FARMERS

LINE OF NO-RETURN MACHINE

CUSTOMERS

BOX OF
GMO CORN
MONSANTO WHEAT

PRODUCT

CONSUMERS

GIZMOS

END-USER


WORDAGE
CLOUD-COMPUTING?
DIGITAL MUSIC
MEDICAL HISTORY
PRINT-OUT

SPINE [WINE]

WRANGERS

DOWNED FROM
3D → BUILT → 2D MODEL
DATA → OBJECT → REFERENCES

BIOT



“It is important to explicitly acknowledge the downsides of any technological transformation”




“Tomorrow composts Today”



“Cognitive load and opportunity costs”
Spime designers design for these

New stuff





“Metrics make things visible”
“Spimes begin and end as data”

“When the entire industrial process is made explicit, when the metrics count for more than the object they measure, the gizmos become spimes.”


Domino's Example



“How do people know what to expect from their things?”



“metahistory is the ultimate determinant of the shape of things”

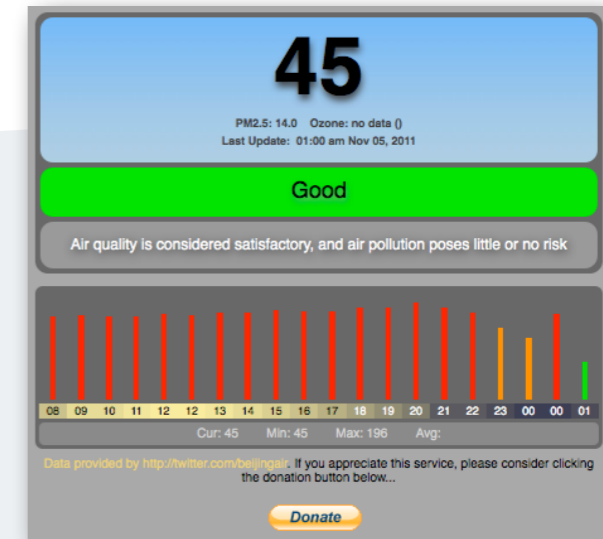


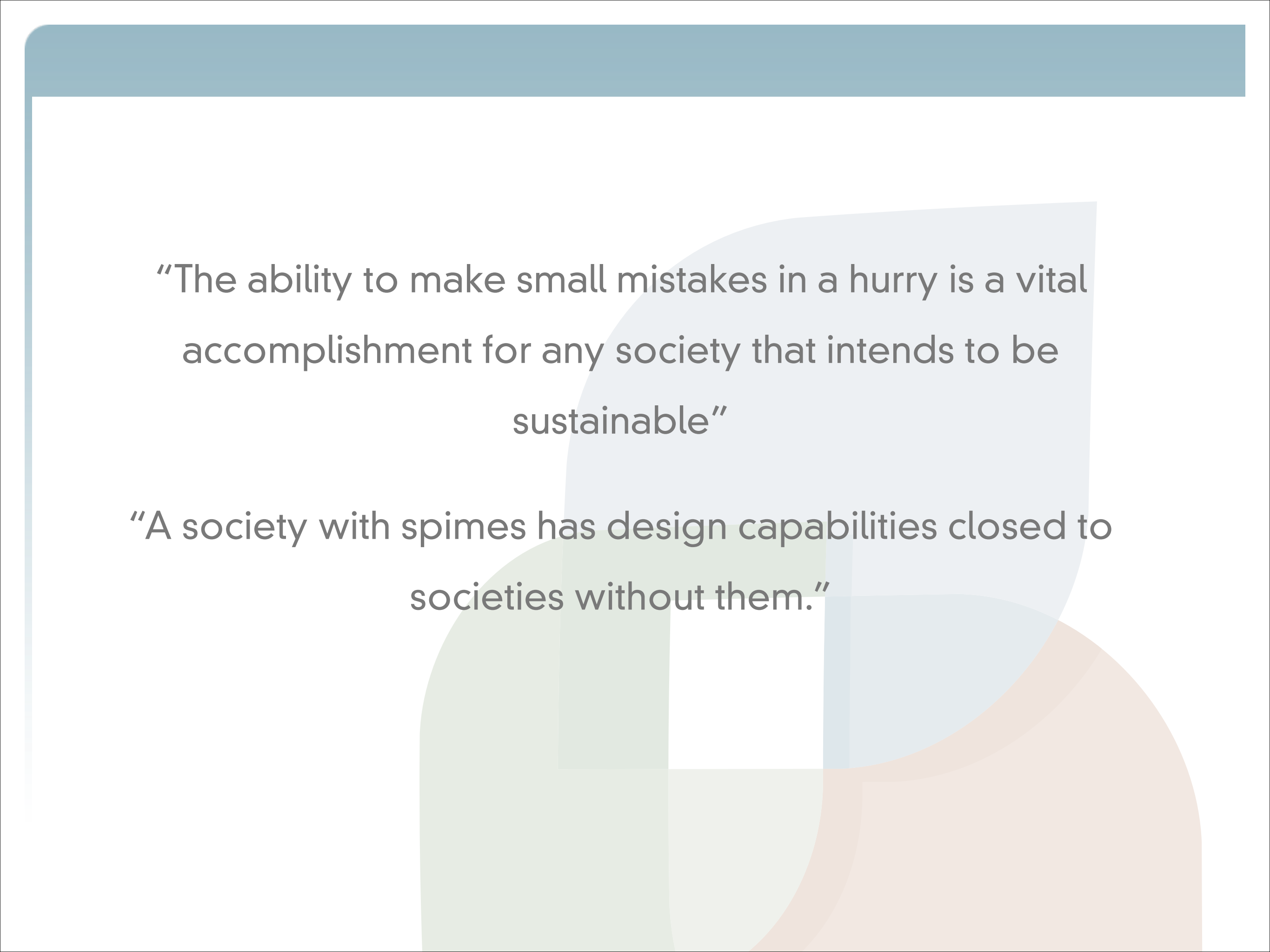
“The premier argument for metahistorical intervention is that
the status quo will kill us”

New stuff

Air Emergency: Beijing

NOV 1 2011, 12:35 PM ET





“The ability to make small mistakes in a hurry is a vital accomplishment for any society that intends to be sustainable”

“A society with spimes has design capabilities closed to societies without them.”

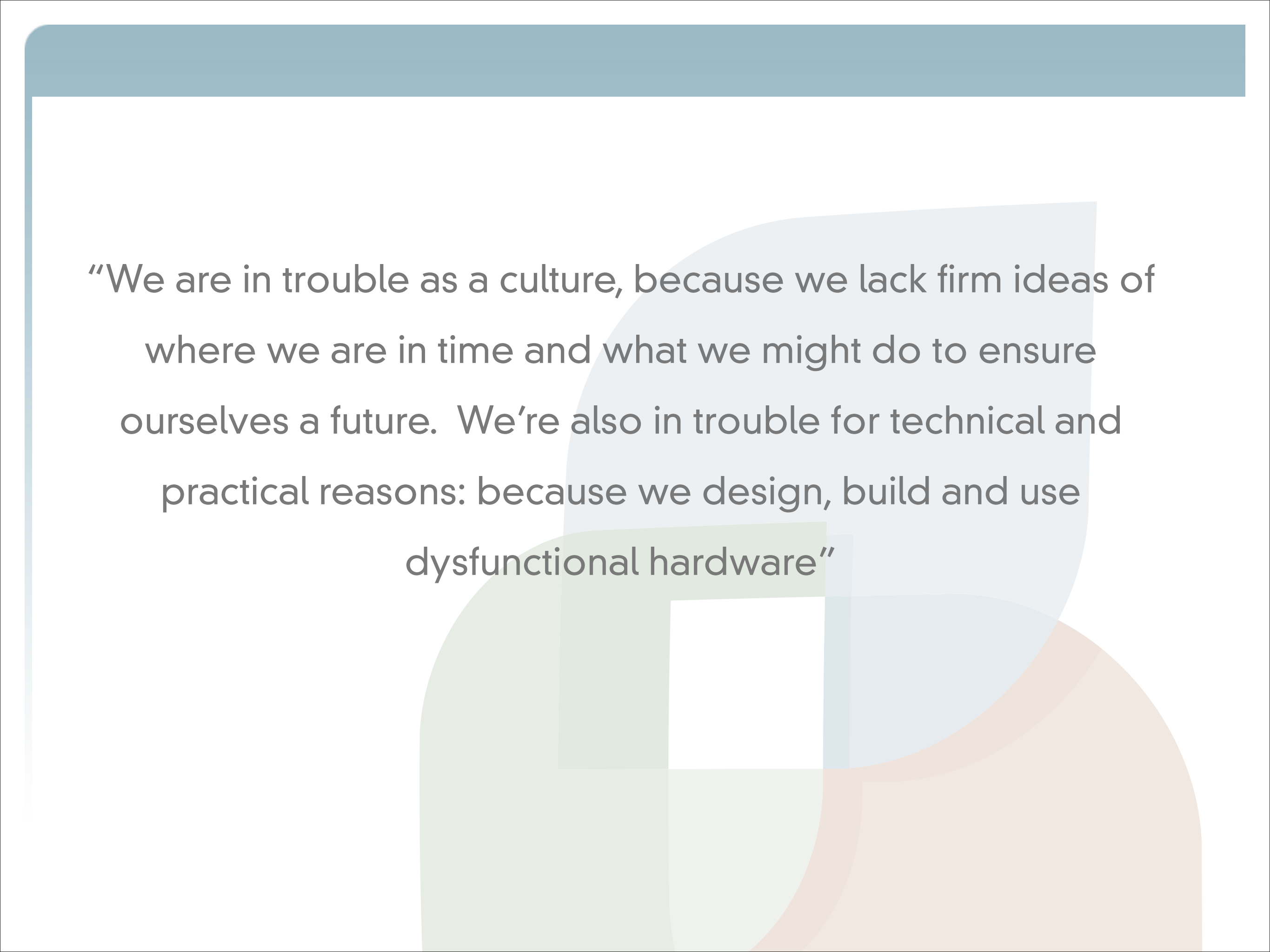


“The values of a synchronic society are temporalistic:
Do we gain more time by doing this or less time?”



“Temporalistic thinking is a moral worldview”

“A society with declining life expectancy is clearly retrogressive. A society with a high infant mortality rate is maladjusted. A society riddled by plagues, diseases, resistant and emergent microbes and environmental illness is decadent.”



“We are in trouble as a culture, because we lack firm ideas of where we are in time and what we might do to ensure ourselves a future. We’re also in trouble for technical and practical reasons: because we design, build and use dysfunctional hardware”

The image features a decorative header bar at the top in a muted teal color. The background is white with three large, overlapping, semi-transparent shapes: a light blue shape at the top right, a light green shape at the bottom left, and a light orange shape at the bottom right. The text 'The Rubbish Makers 7' is centered in the upper portion of the page.

The Rubbish Makers 7

The image features a decorative header bar at the top in a muted teal color. The background is white with several large, overlapping, semi-transparent shapes in light blue, light green, and light orange. The text 'The Rubbish Makers 7' is centered in the upper portion of the page.

The Rubbish Makers 7

“Animals can’t design. Apes will fling objects, but humans will throw objects, practice throwing them and refine the grain of the material so that the thrown object throws better.... Humans get far better at interacting with objects than any animal can ever manage; and since humans are also capable of abstract analysis; they are also better at getting better. Humans have technosociety.”





“Entropy requires no maintenance”



“Entropy requires no maintenance”



“Entropy requires no maintenance”

“Pollution is not subject to consumption”



“Entropy requires no maintenance”

“Pollution is not subject to consumption”



“We don’t consume waste”

Shaping Things

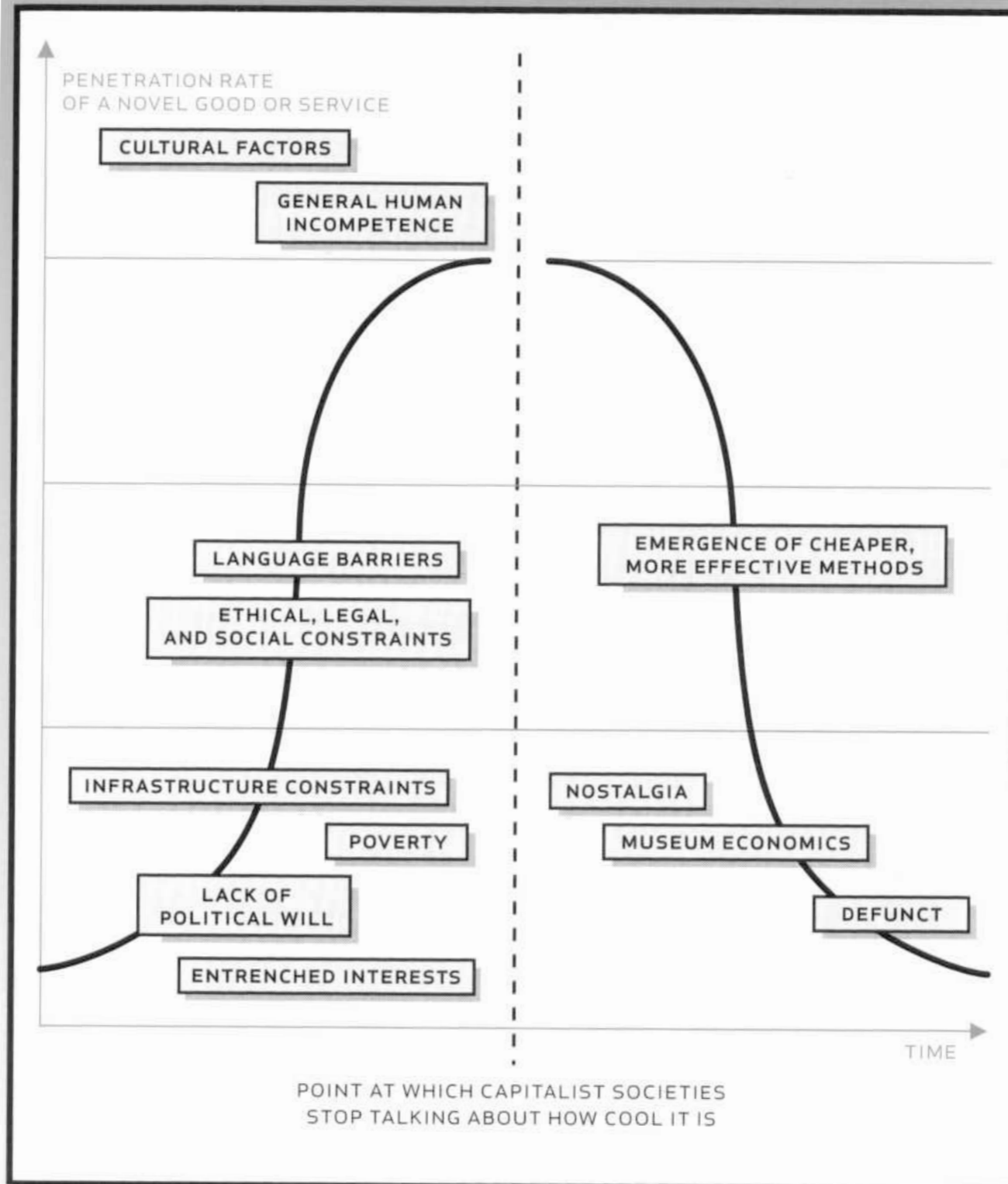


<http://share.ovi.com/media/Conversations.public/Conversations.10012>



OBSOLESCENCE IS INNOVATION IN REVERSE

"The Mirrored S-Curve of Technological Adaption"

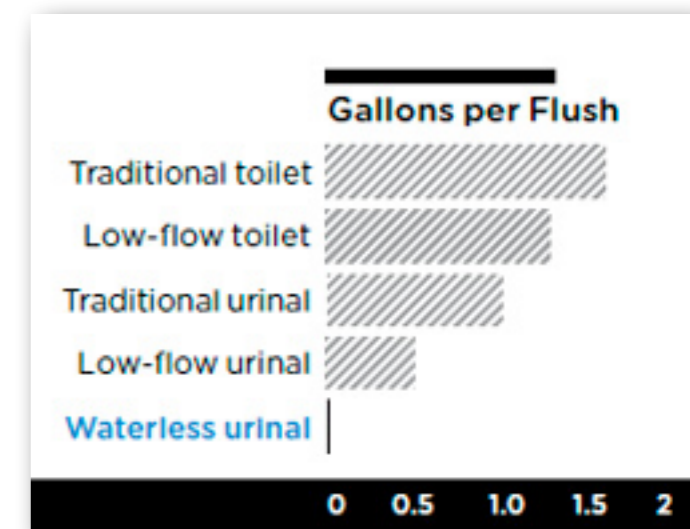




How do things move along this curve?

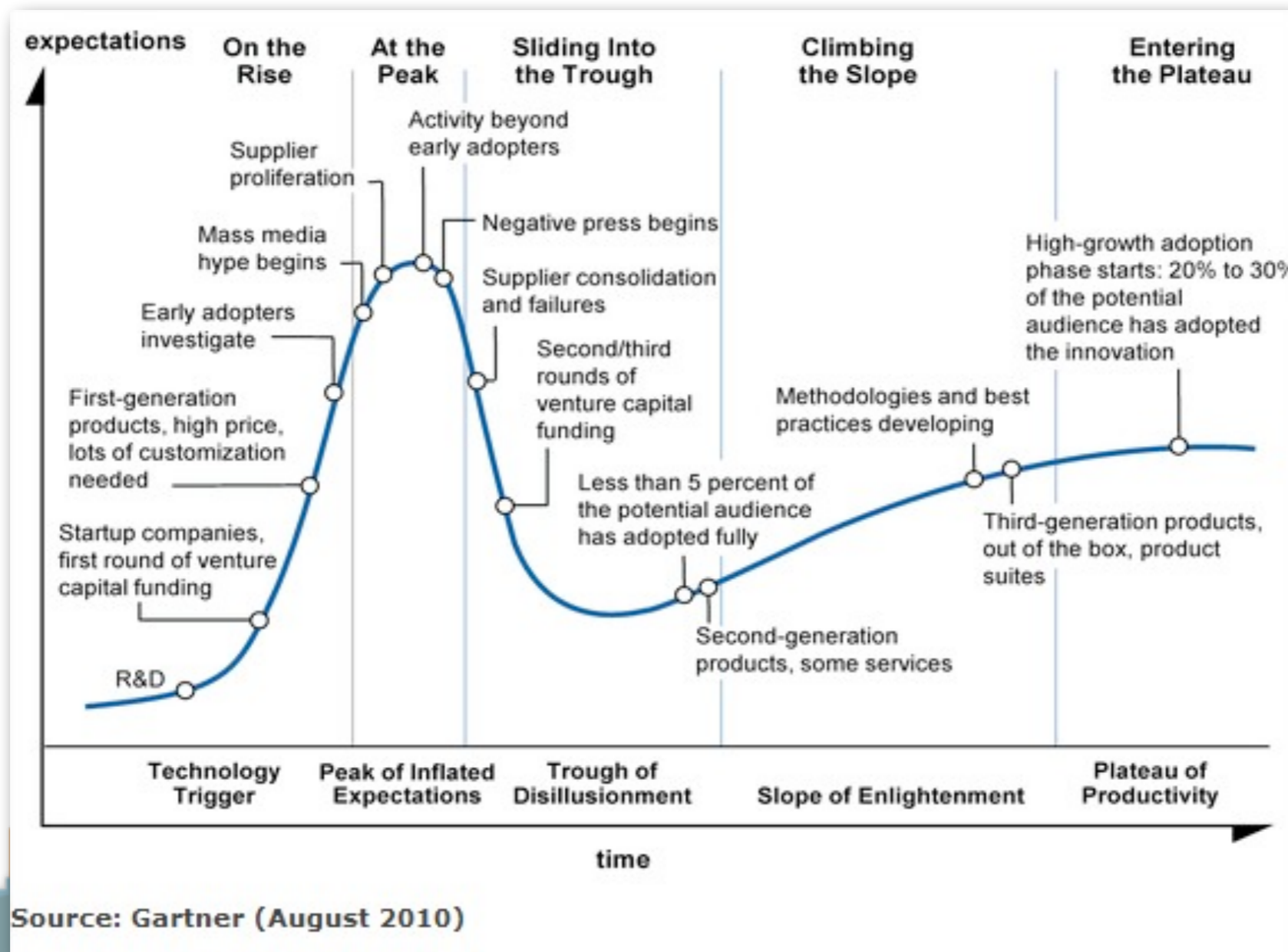
“It isn’t magic. People do it. Some people are better at it than others”

Shaping Things

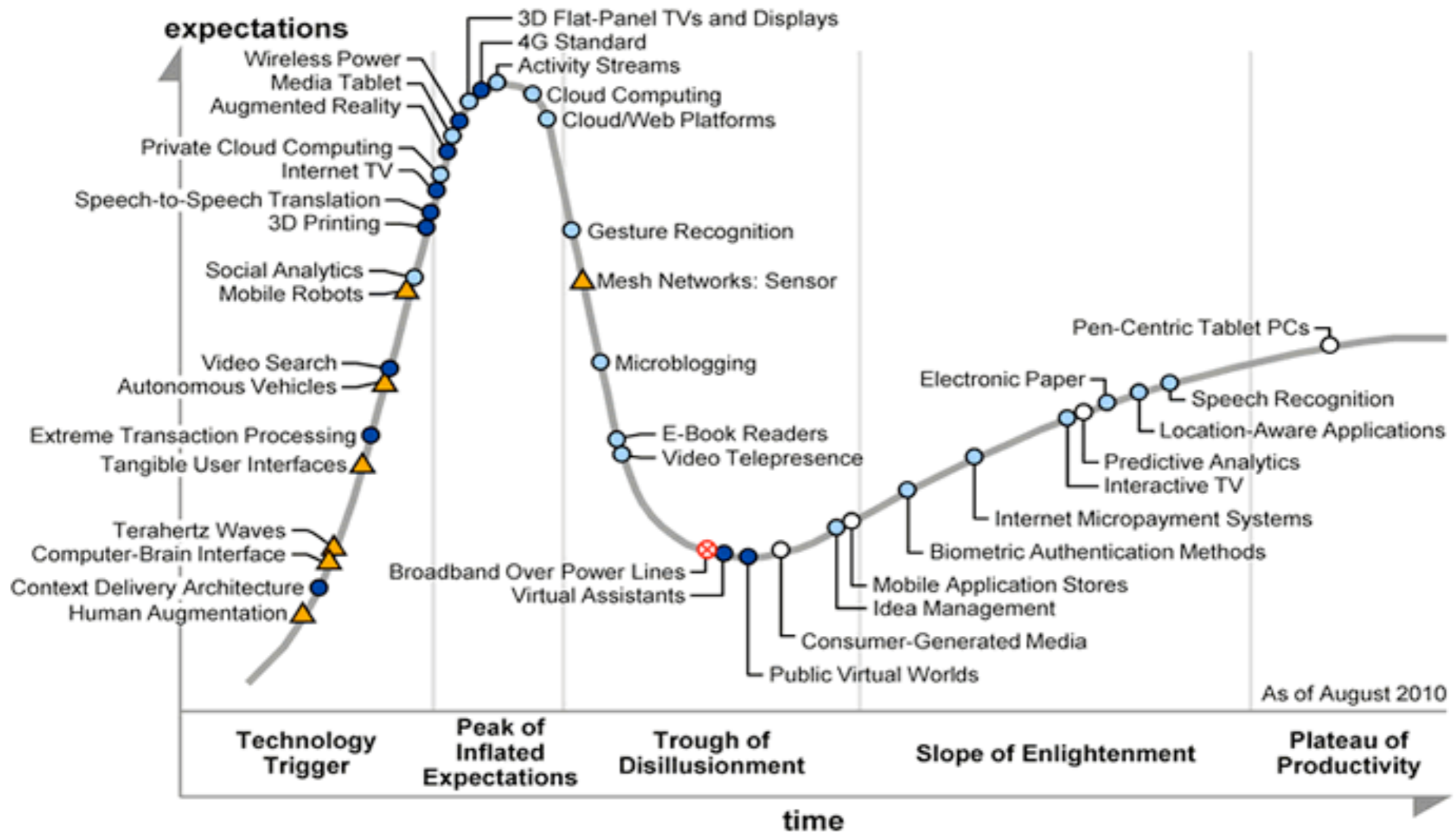


Shaping Things

“Gartner’s Hype Cycle characterizes the typical progression of an emerging technology, from over-enthusiasm through a period of disillusionment to an eventual understanding of the technology’s relevance and role in a market or domain. Each phase is characterized by distinct indicators of market, investment and adoption activities.”



Shaping Things



Years to mainstream adoption:

○ less than 2 years

● 2 to 5 years

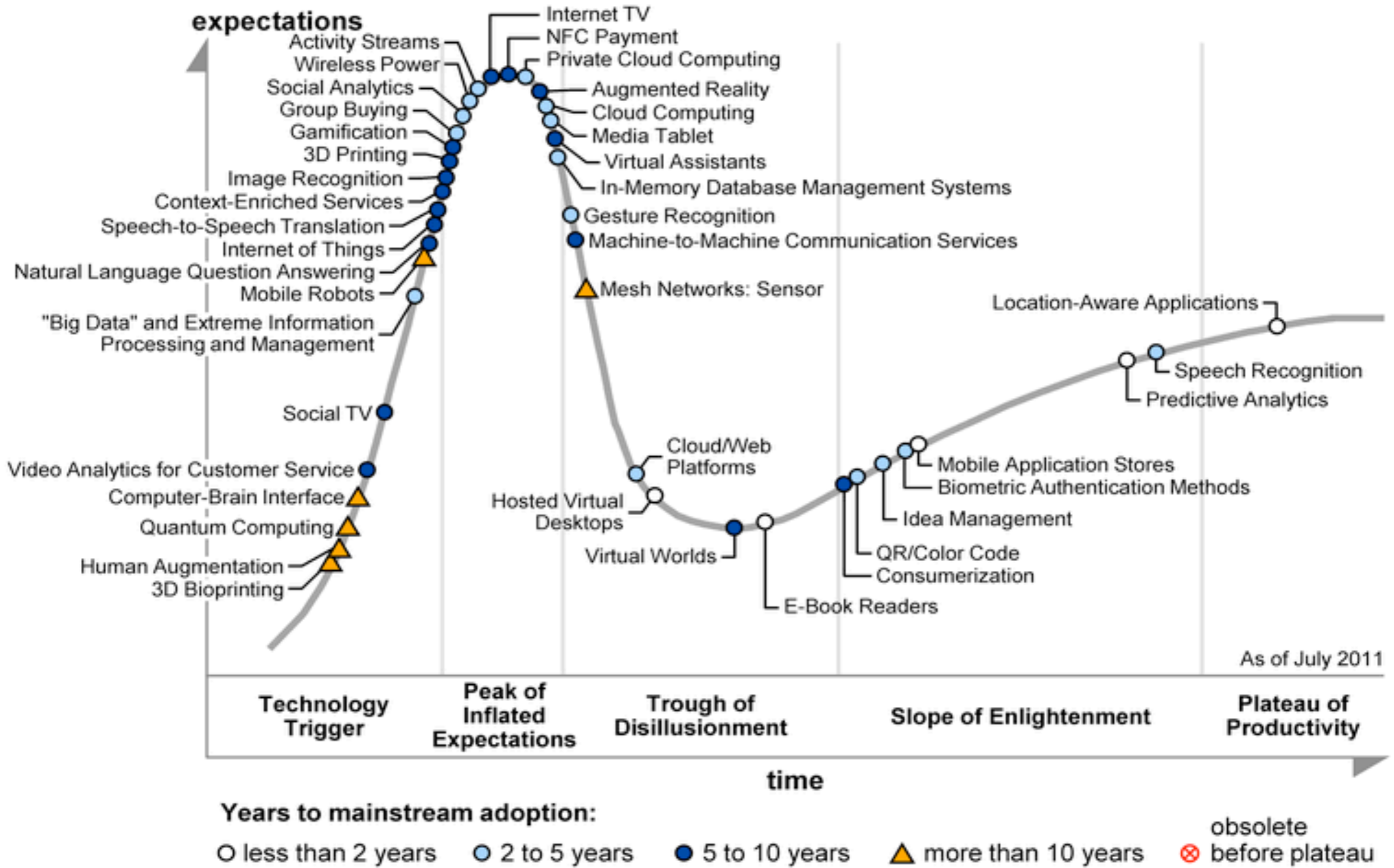
● 5 to 10 years

▲ more than 10 years

obsolete

⊗ before plateau

Shaping Things



Shaping Things



Shaping Things



“Most Advanced, Yet Acceptable”



“being designery”



Shaping Things

“an absolutely acceptable object would be invisible”



Shaping Things

“a thing is not merely a material object, but a frozen techno-social relationship.”



“Most Advanced Yet Acceptable”



Shaping Things 9

“ On eBay [and Amazon] it’s now common to find objects for auction for a penny. I can have that object for a penny, because the point was to inveigle me into the auction process and a relationship with the auctioneer. If i’m given something for free, in a GIZMO-End User situation, then I need to be warily aware that this is almost certainly a loss leader of some kind meant to lure me into some tangled production chain.”



Shaping Things 9

“ I’m not supposed to worry my pretty little head about any of that, but you know something? I know that I am paying for it somehow. Those phenomena do impinge on me: legal, social, ethical, environmental, all of them... They should inform my decision about whether I buy that bottle and integrate its contents into my body.”



“My relationship to this bottle of wine is a parable of my human relationship to all objects.”



Who is able to expose all these externalities in a way that is Most Advanced Yet Acceptable?



Designers



Shaping Things 10

“A SPIME is by definition, the protagonist of a documented process. It is an historical entity with an accessible, precise trajectory through space and time”



Shaping Things 10: read 71-73



RFID

- Review the Technology
- Pets and RFID
 - pets who don't have RFID
- "Tomorrow composts Today"
- Passive vs. Active
- WISPs
 - <http://wisp.wikispaces.com/WISPHardware>
- Skimming
- an "Internet of Things"



Making a 3D Model



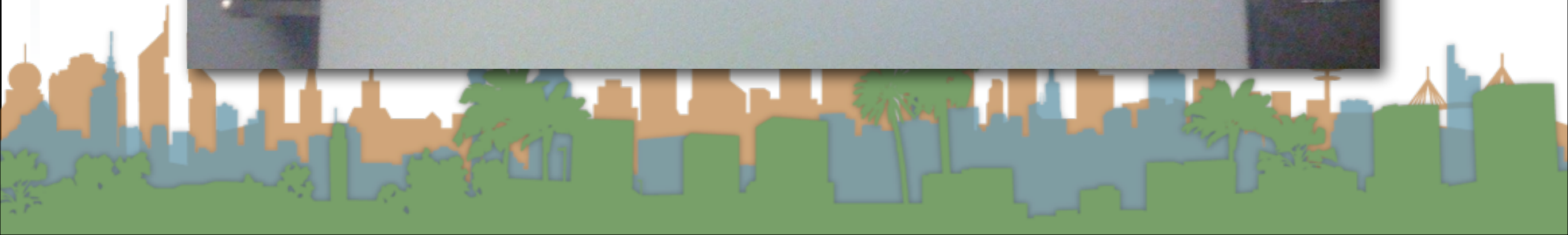
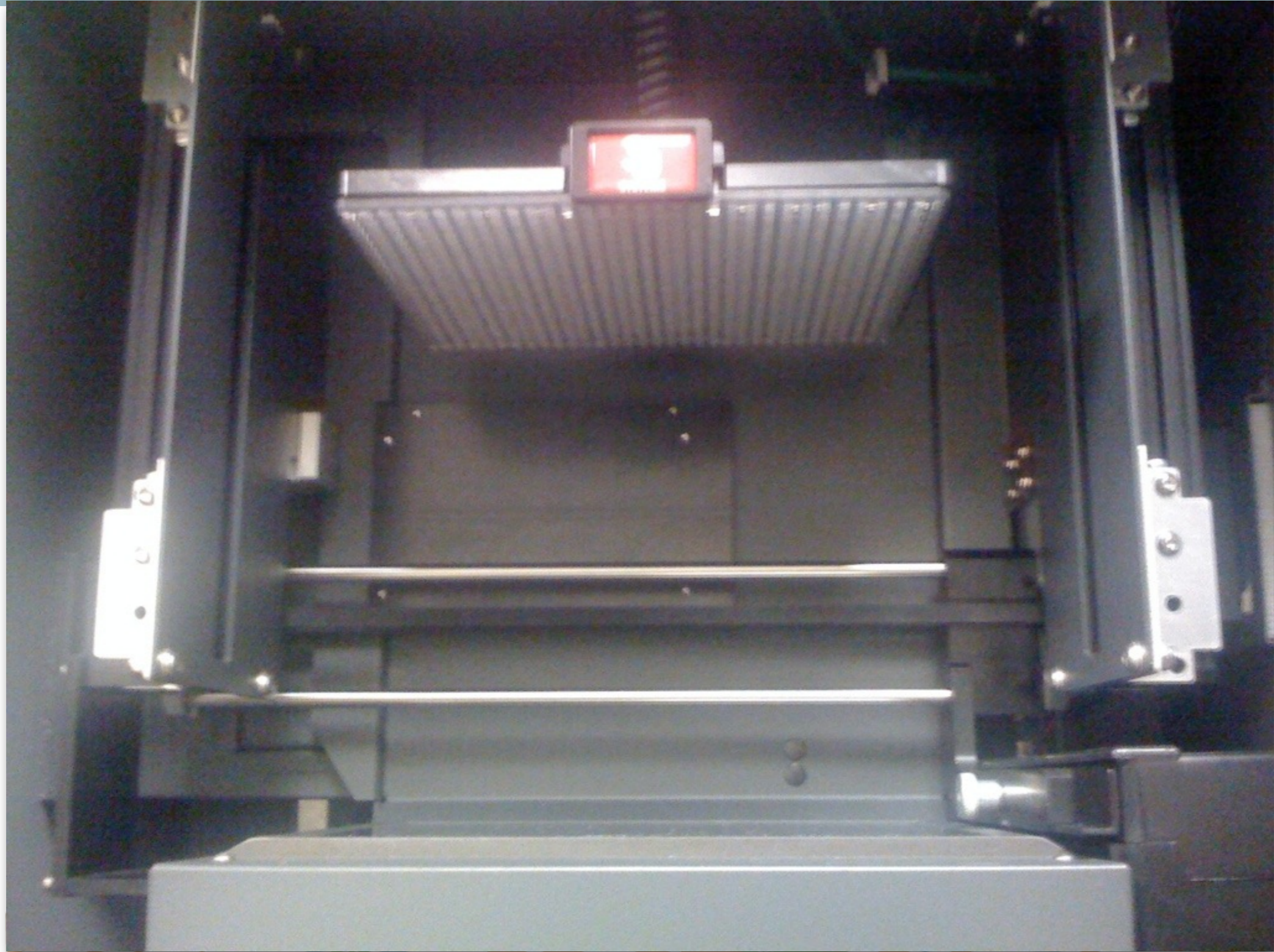
Making a 3D Model



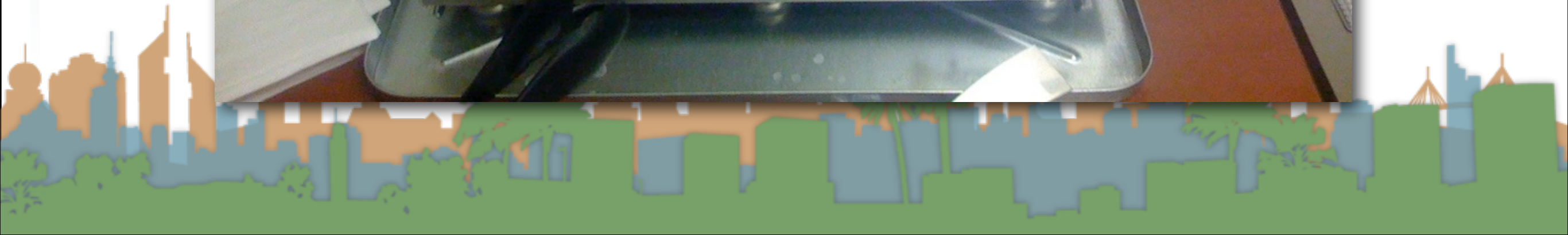
Making a 3D Model



Making a 3D Model



Making a 3D Model



Making a 3D Model



Making a 3D Model



Making a 3D Model



Making a 3D Model



IoT

- GPS enabled monitors
- Global Network
- What does the design of a system that is aware of most things at all times look like?
 - Wranglers
 - Inventories
 - The lifestyle magazine as a dynamic socio-technical infrastructure



Spime

- What happens when “The model is more detailed than the physical object it models.”
- De novo
- Reverse Engineered
- Interaction effects
- SPIME monitors++
- Intellectual property



“It may not seem that I “need” all that information, but that’s an old-fashioned way to think. I don’t “need” every web page on the internet, either.

It’s not a question of designing an internet of things to meet my so-called “needs.”

It’s vastly cheaper and simpler just to enable automatic information-generating devices and processes, then search them mechanically and cybernetically, to figure out what I “need.”



Fabbing

- fabricators will disintermediate the product and gizmo worlds



Money

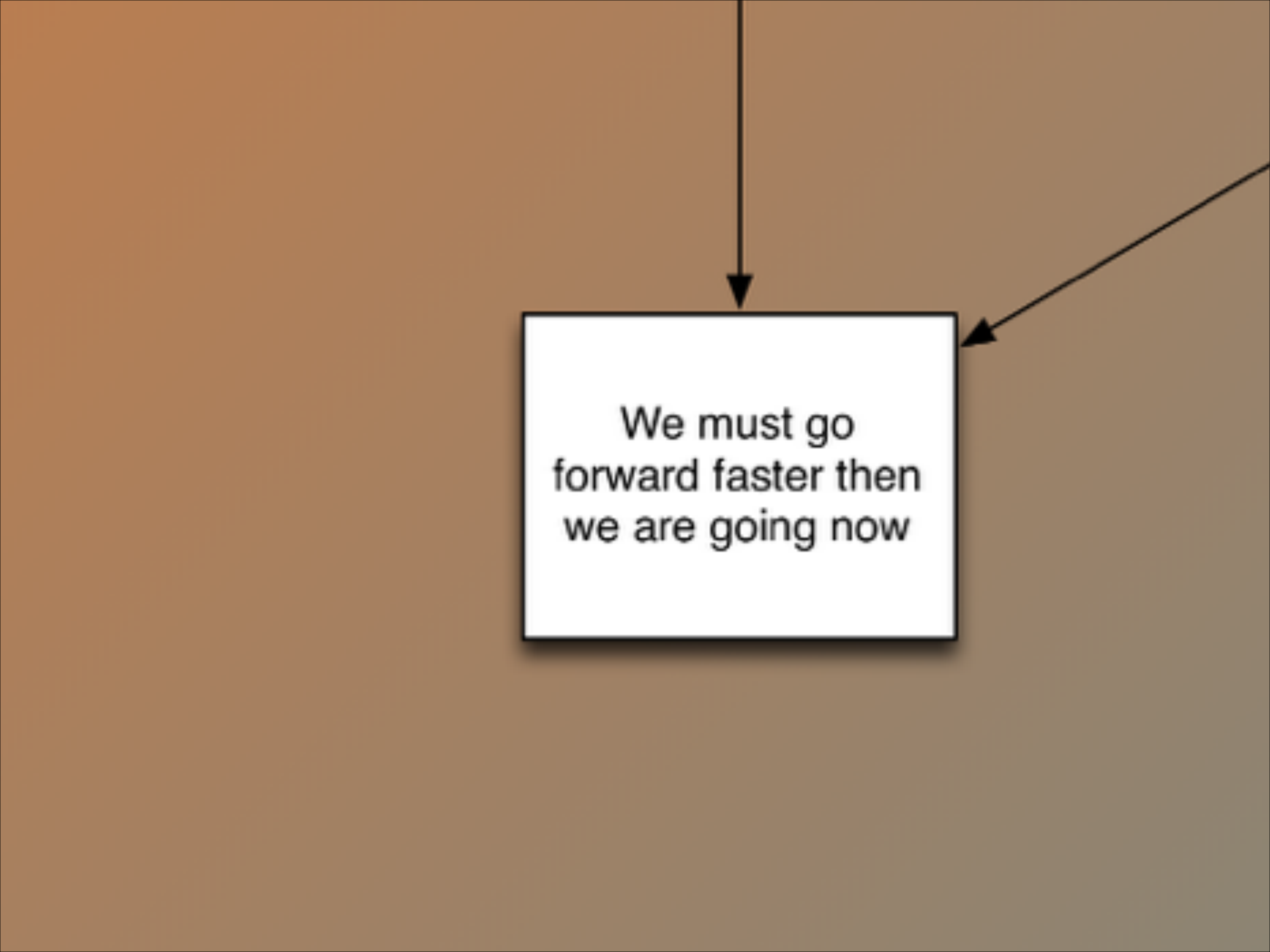
- Gold
- Paper money backed by gold
- Paper money not backed
- Electronic money
- Credit History



Pulling it all together • Problem



We have a problem
with our current
relationship with
technology, it's
going to kill us

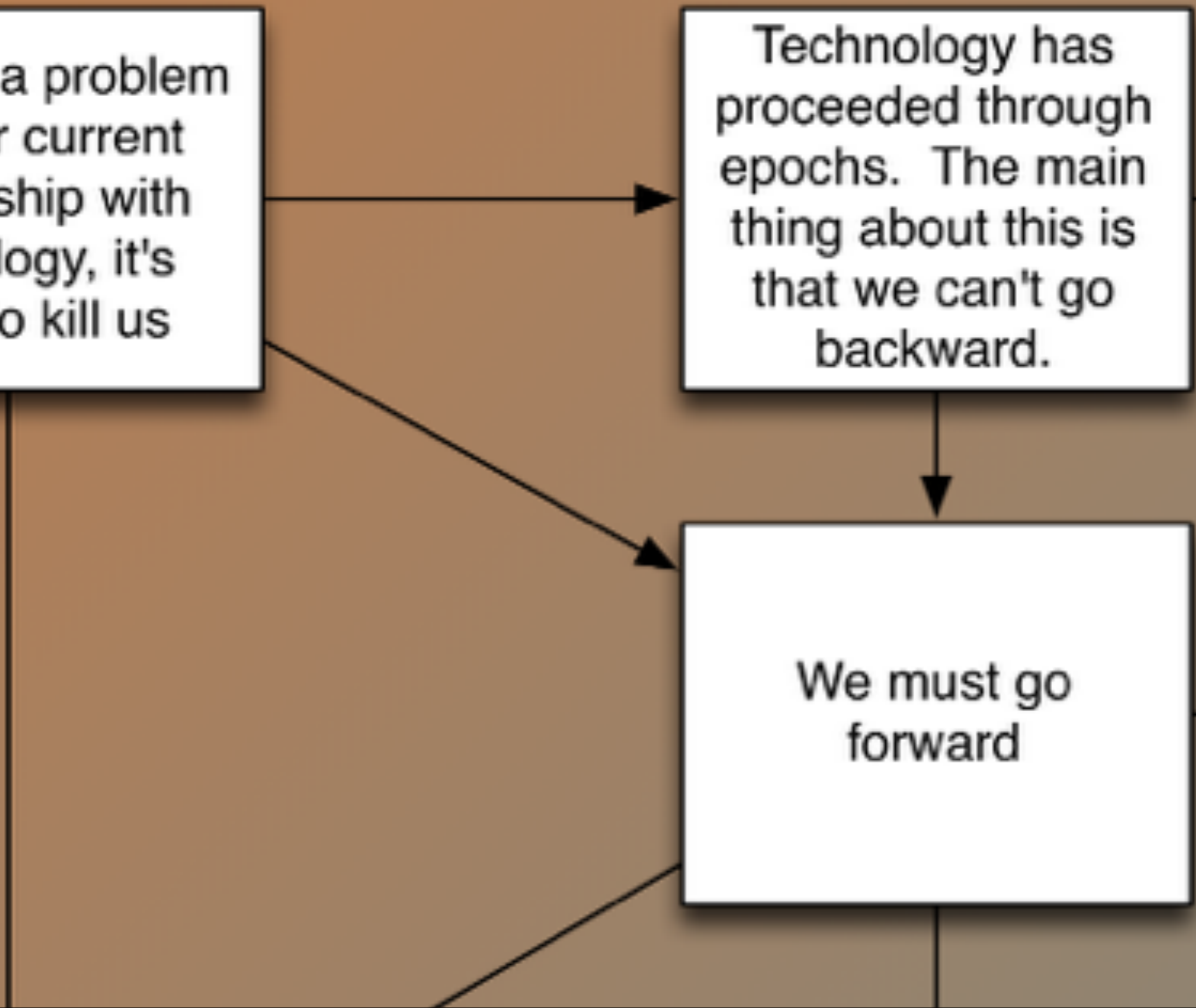


We must go
forward faster than
we are going now

We have a problem with our current relationship with technology, it's going to kill us

Technology has proceeded through epochs. The main thing about this is that we can't go backward.

We must go forward

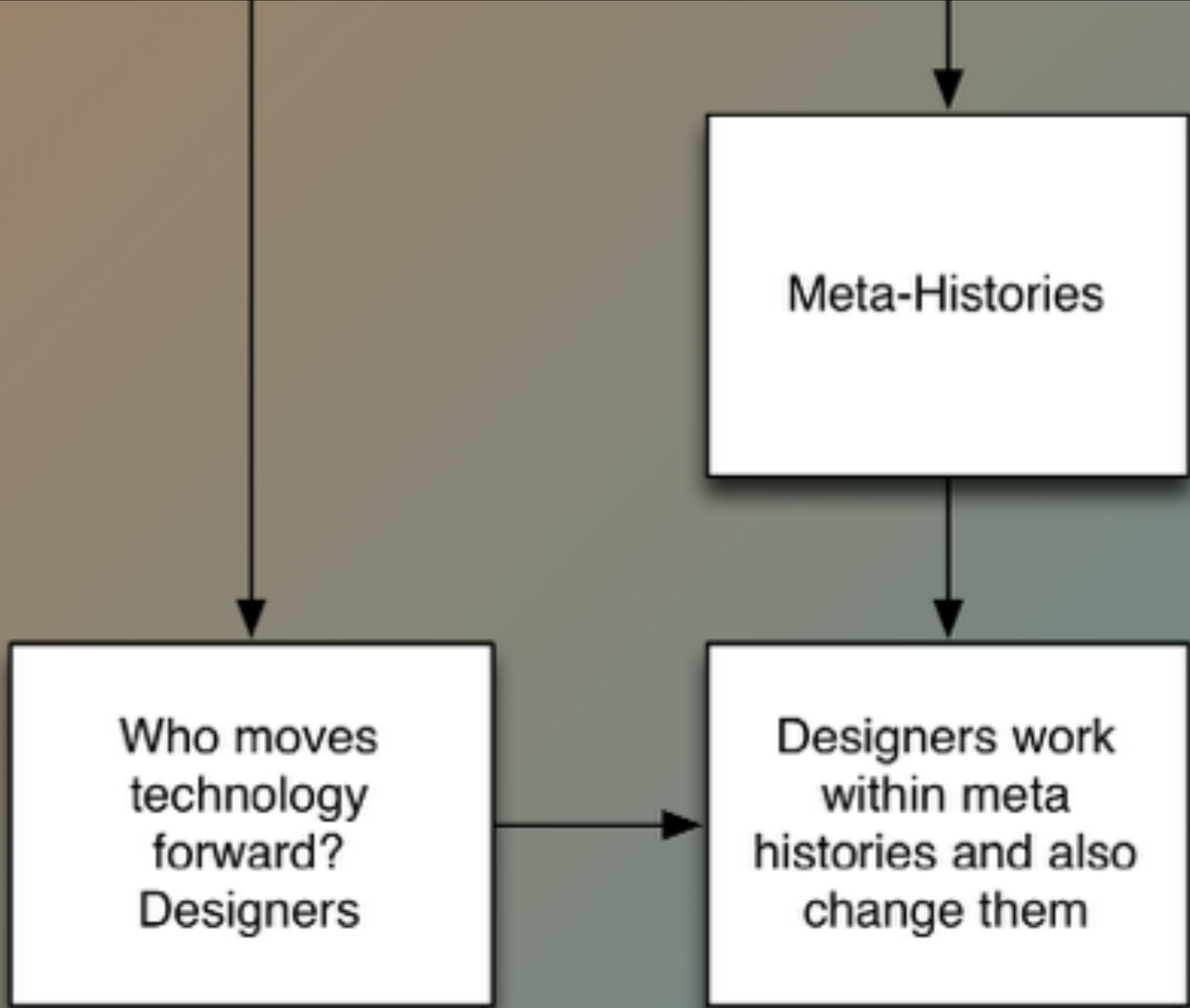



```
graph TD; A[ ] --> B[We must go forward]; C[ ] --> B; B --> D[What does forward even mean?]; D --> E[Meta-Histories]; B --> E;
```

We must go forward

What does forward even mean?

Meta-Histories



Meta-Histories

Who moves
technology
forward?
Designers

Designers work
within meta
histories and also
change them

↓

→

Designers work within meta histories and also change them

```
graph TD; A[Designers work within meta histories and also change them] --> B[Lowry]; A --> C[MAYA]; B --> C;
```

→

Lowry

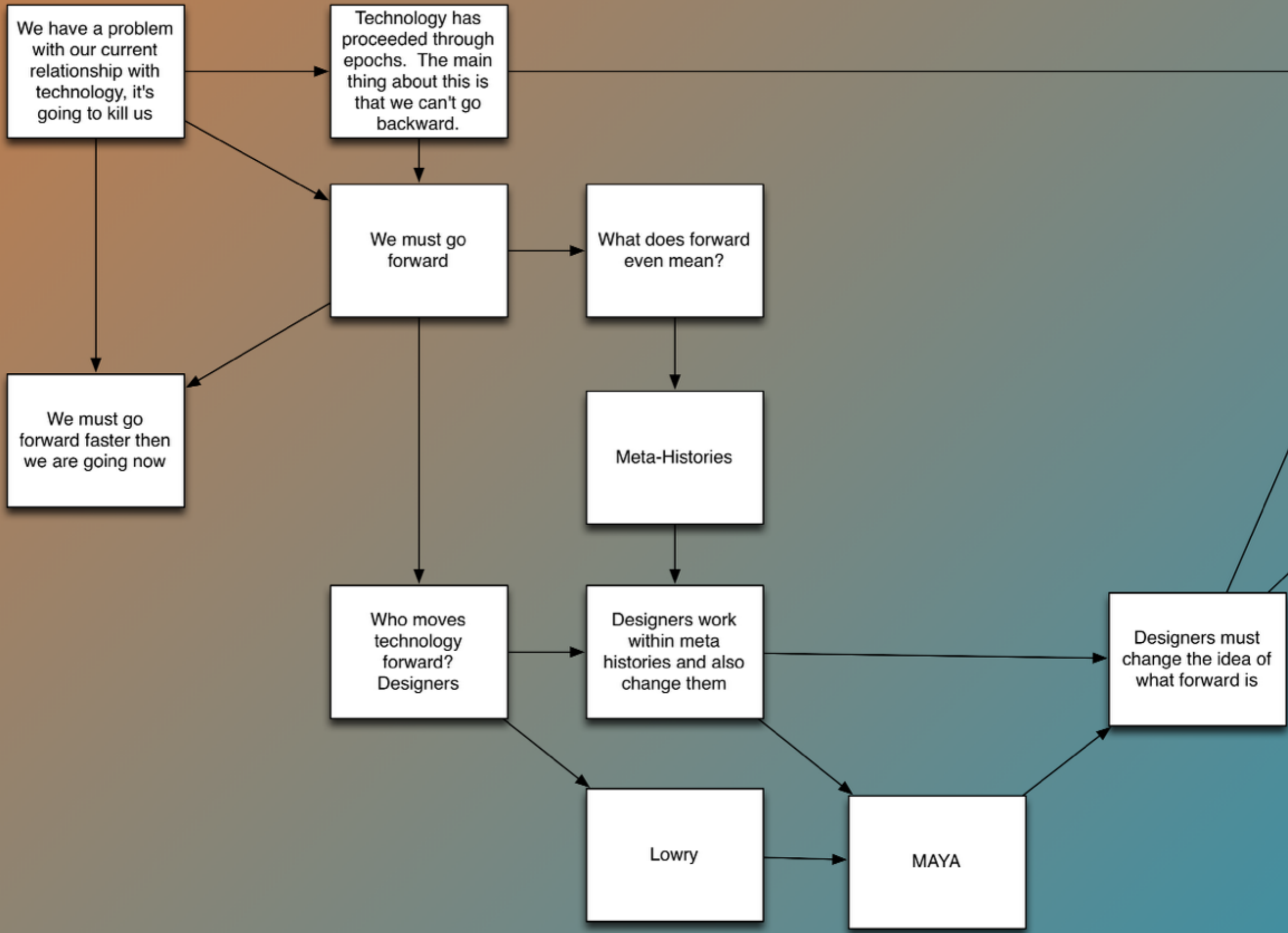
→

MAYA

MAYA

```
graph LR; A1[ ] --> MAYA; A2[ ] --> MAYA; A3[ ] --> MAYA; MAYA --> B[Designers must change the idea of what forward is];
```

Designers must
change the idea of
what forward is

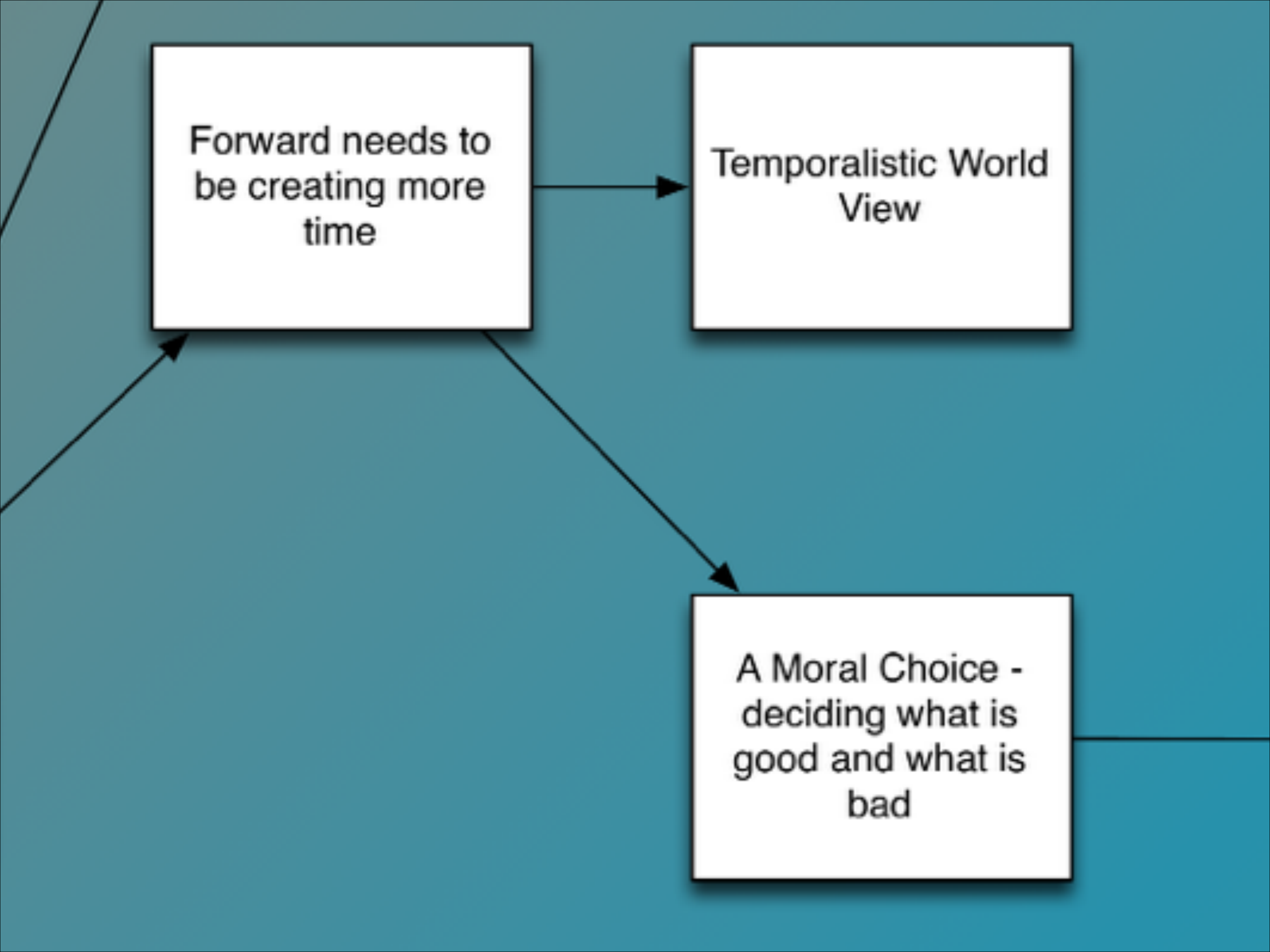




Forward needs to
be creating more
time

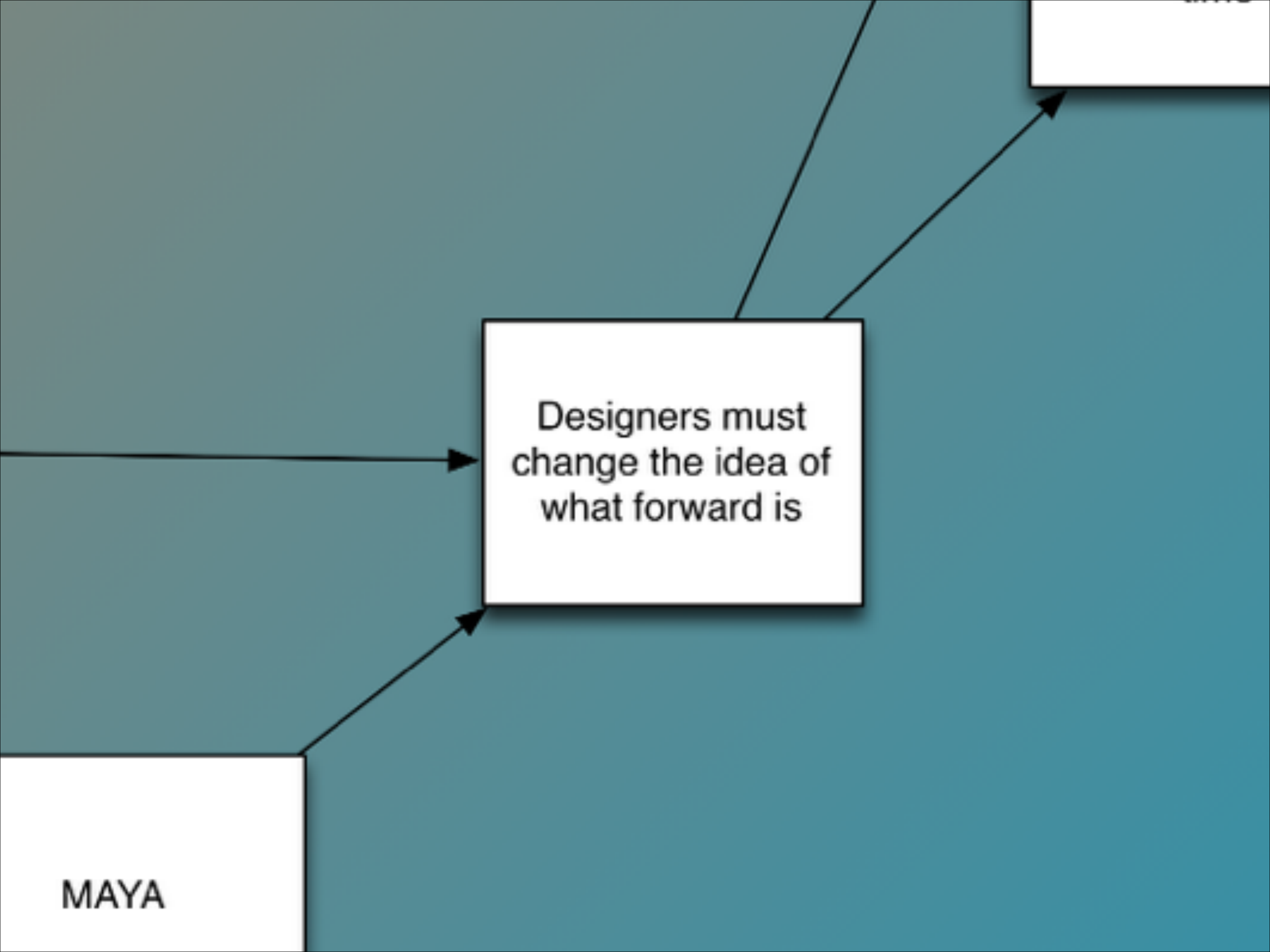
Temporalistic World
View

A Moral Choice -
deciding what is
good and what is
bad



MAYA

Designers must
change the idea of
what forward is




```
graph LR; A[ ] --> B[Reconfigure the relationship between objects and people again]; B --> C[Cognitive Load Opportunity Cost];
```

Reconfigure the relationship between objects and people again

Cognitive Load Opportunity Cost

A wine bottle
represents a
snapshot in a
stream of human
and material
resources

stream of human
and material
resources

load
Cost

SPIME is a digital
resource

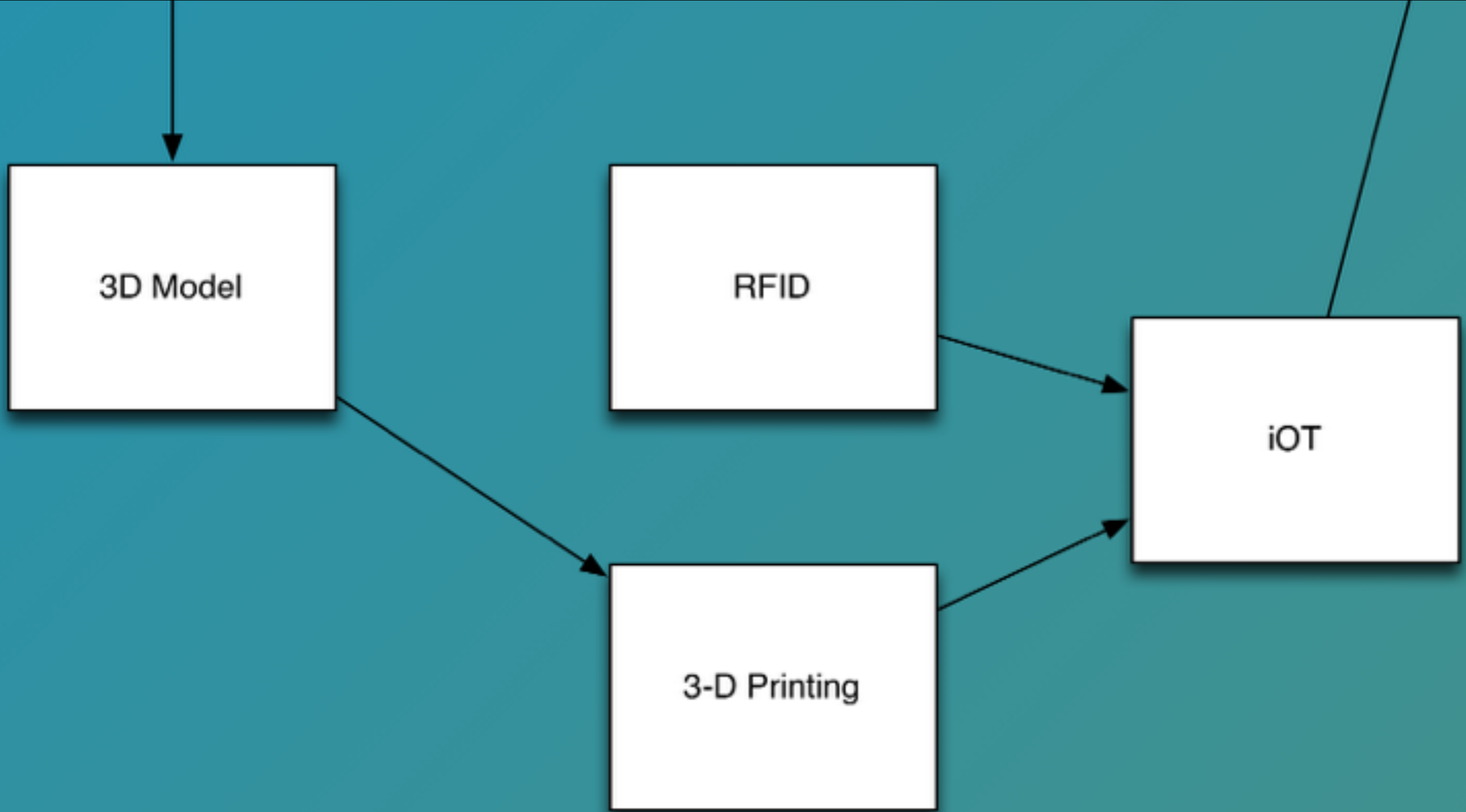
World

```
graph TD; A[ ] --> B[3D Model]; B --> C[3-D Printing];
```

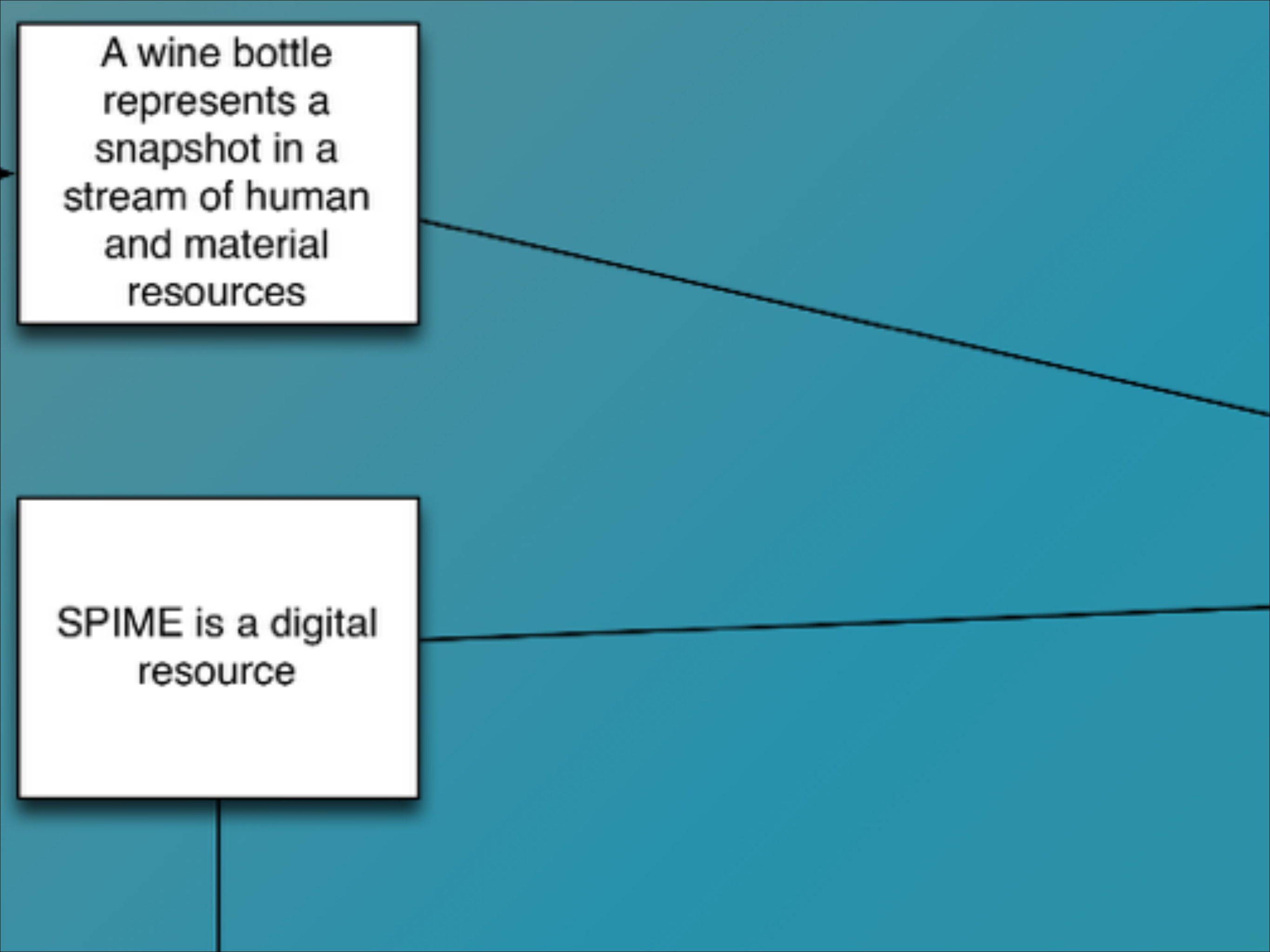
3D Model

RFID

3-D Printing



A wine bottle
represents a
snapshot in a
stream of human
and material
resources



SPIME is a digital
resource

A wine bottle represents a snapshot in a stream of human and material resources

SPIME is a digital resource

SPIMEs can help us to keep track of the flow of resources. SPIMEs make those resources visible




```
graph TD; A[ ] --> B[SPIMES can help us to keep track of the flow of resources. SPIMES make those resources visible]; C[ ] --> B; B --> D[So we can measure if we are making more time or not]; D --> E[ ]
```

SPIMES can help us to keep track of the flow of resources. SPIMES make those resources visible

So we can measure if we are making more time or not

```
graph TD; A[ ] --> B[So we can measure if we are making more time or not]; B --> C[Some changes are good. Some changes are bad.];
```

So we can measure
if we are making
more time or not

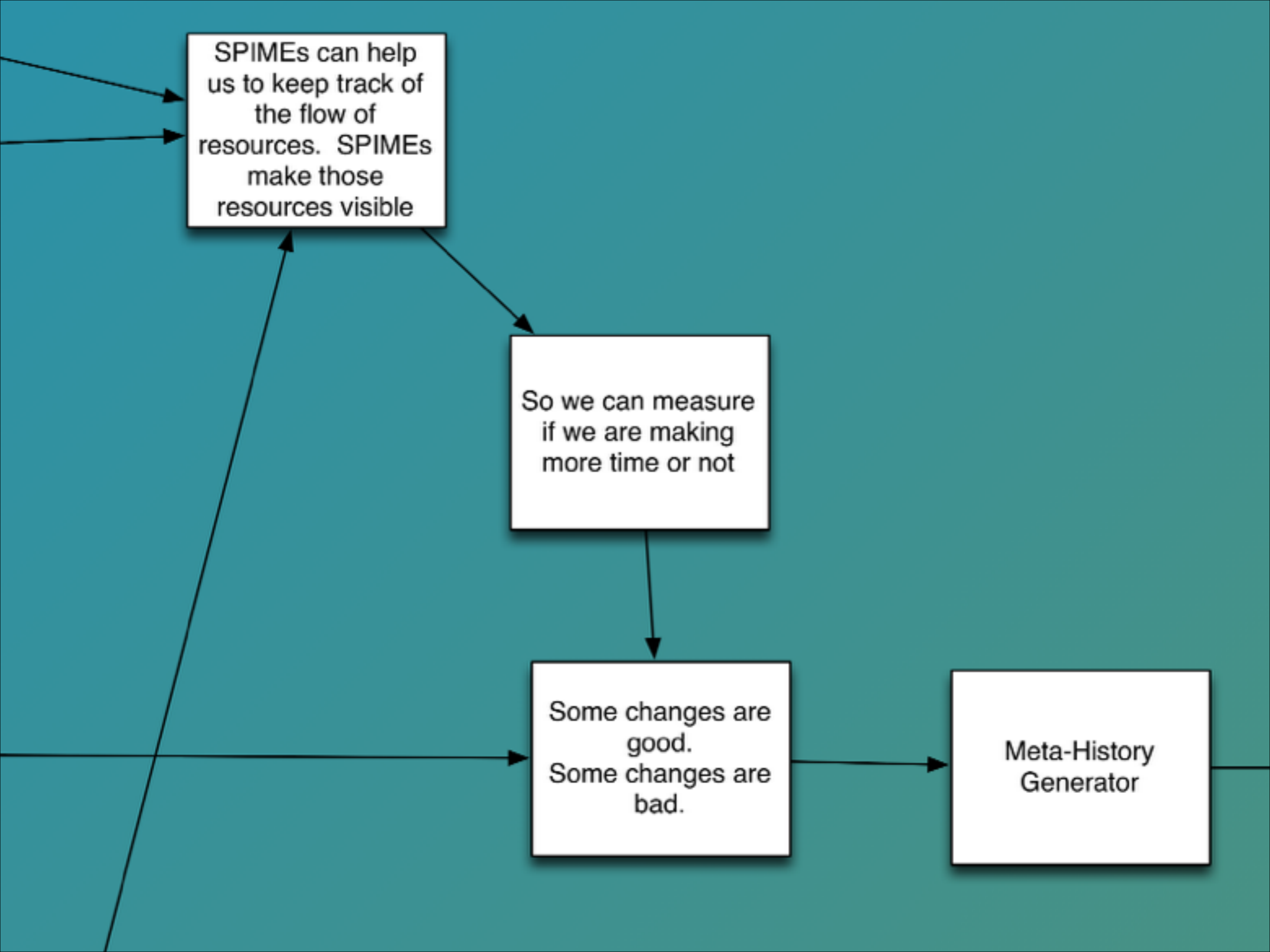
Some changes are
good.
Some changes are
bad.

SPIMEs can help us to keep track of the flow of resources. SPIMEs make those resources visible

So we can measure if we are making more time or not

Some changes are good.
Some changes are bad.

Meta-History Generator





This is how we can determine the Shape of Things...
What the shape of things should be

Utopia

Oblivion

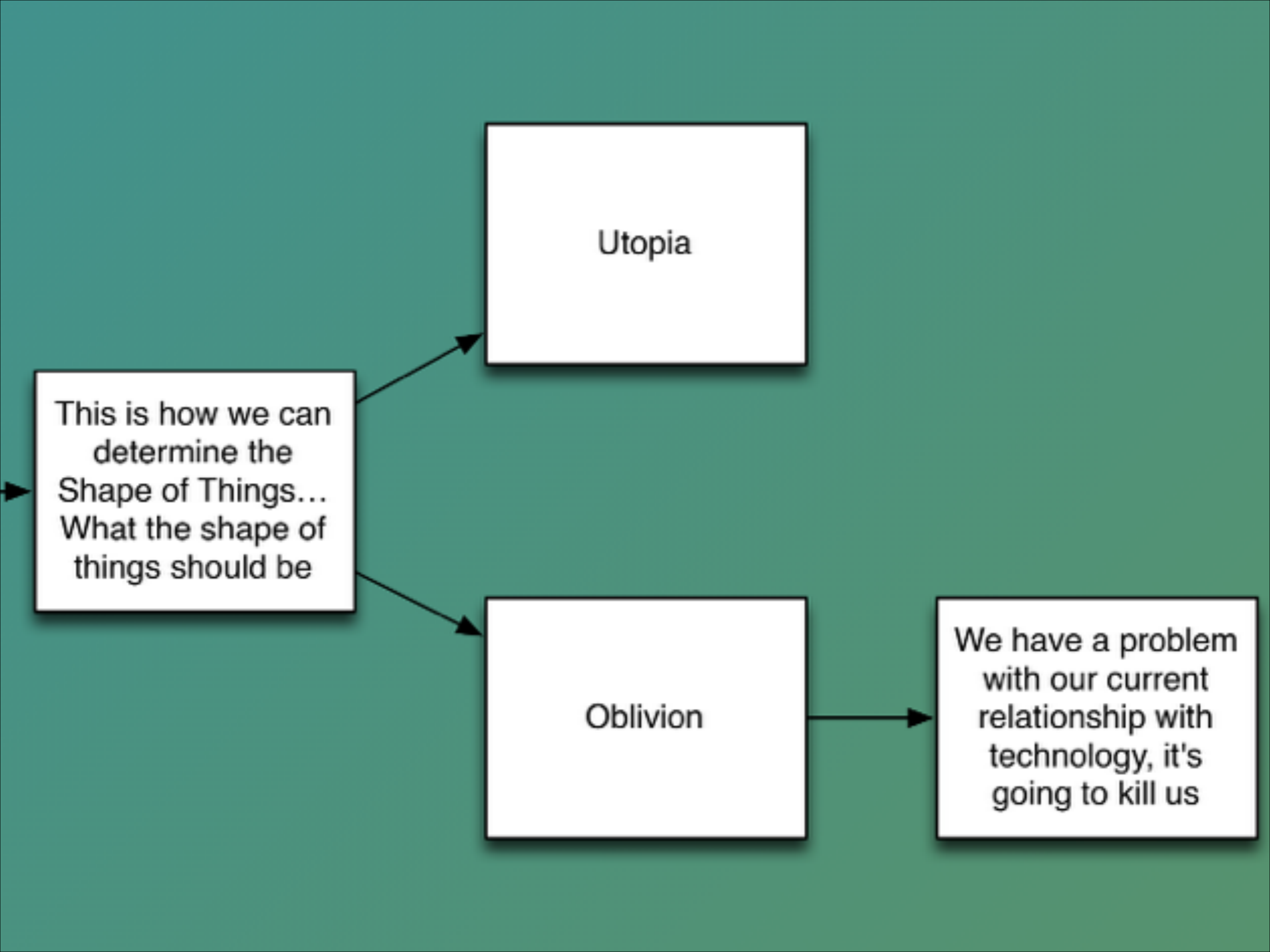
can
...
of
e

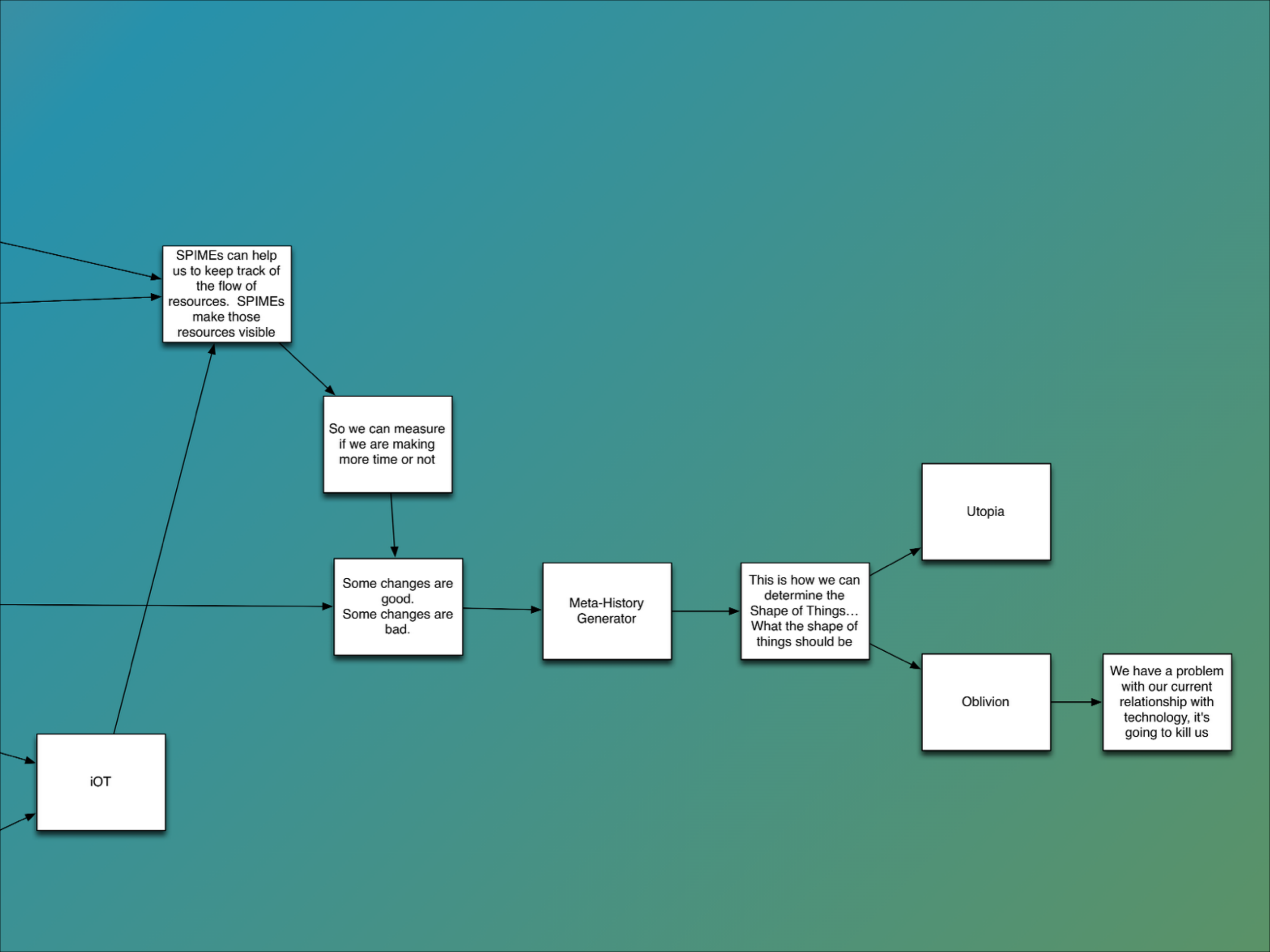
Utopia

Oblivion

We have a problem with our current relationship with technology, it's going to kill us







SPIMes can help us to keep track of the flow of resources. SPIMes make those resources visible

So we can measure if we are making more time or not

Some changes are good. Some changes are bad.

Meta-History Generator

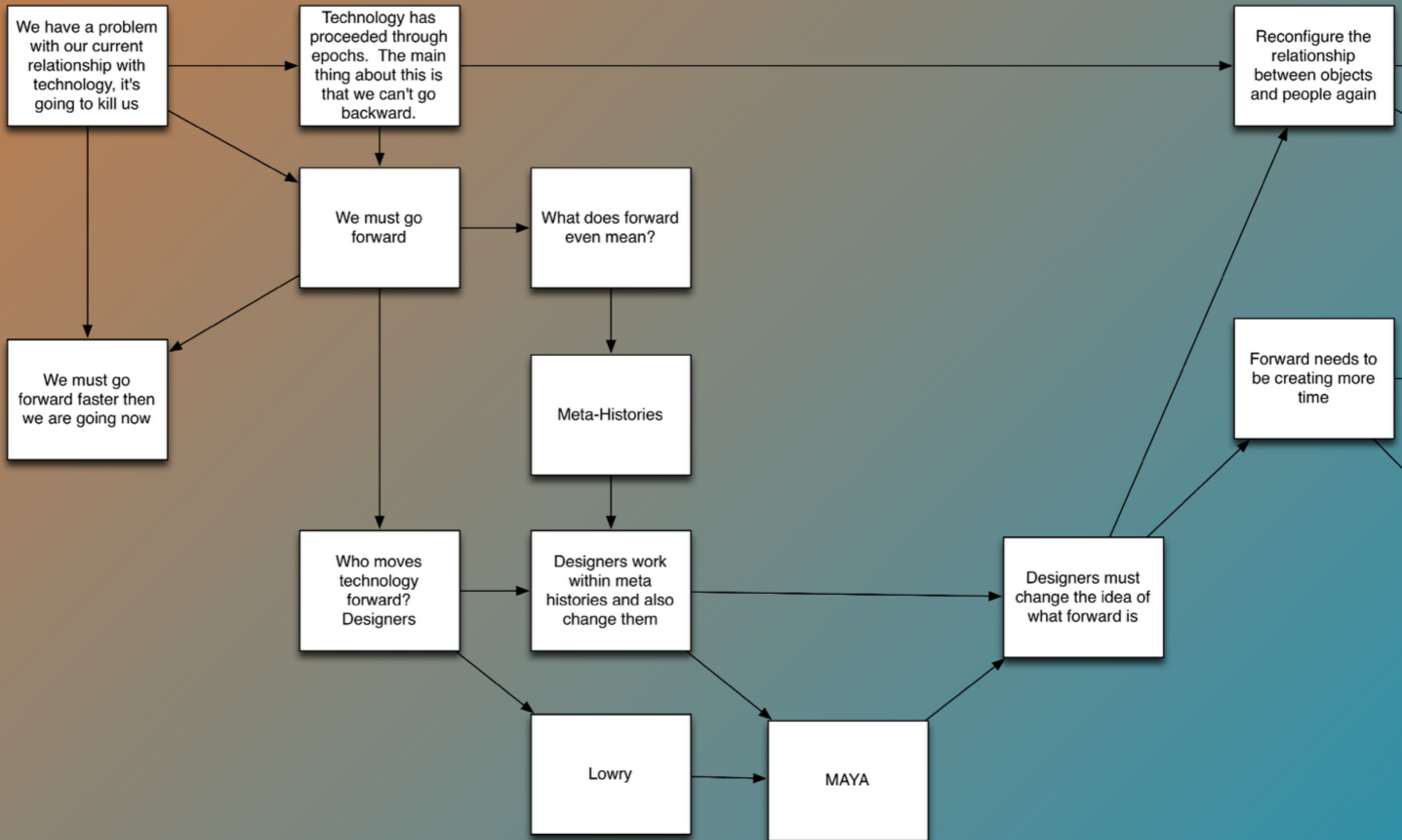
This is how we can determine the Shape of Things... What the shape of things should be

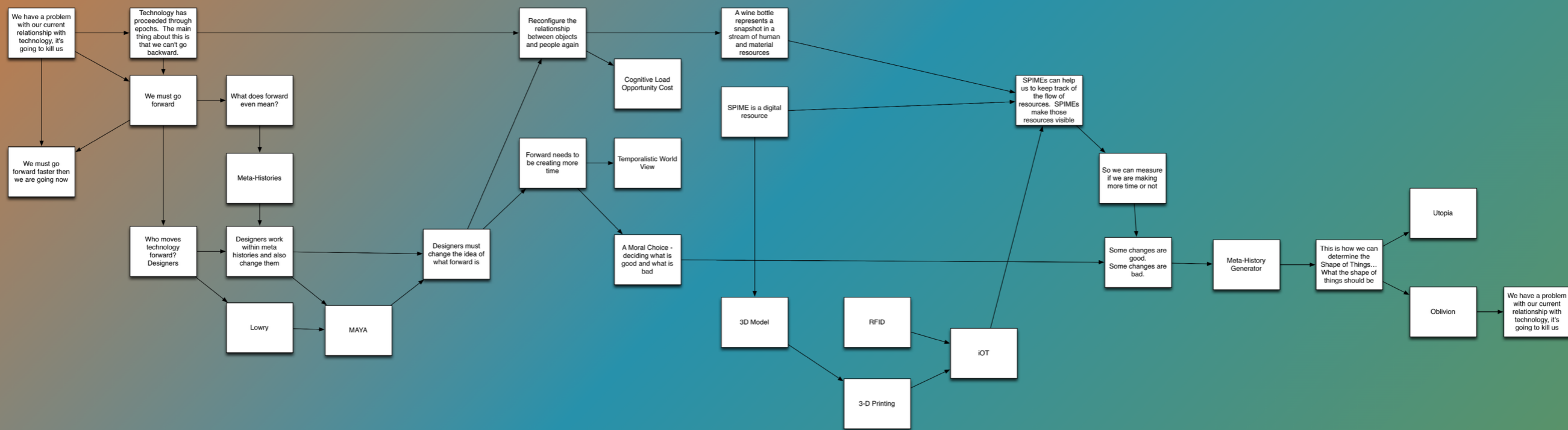
Utopia

Oblivion

We have a problem with our current relationship with technology, it's going to kill us

iOT





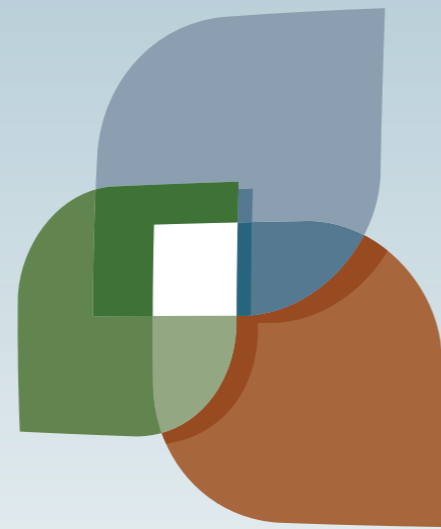
Shaping Things

“The only sane way out of a technosociety is through it, into a newer one that knows everything the older one knew and knows enough new things to dazzle and dominate the denizens of the older order. That means revolutionizing the interplay of human and object. It means bringing more attention and analysis to bear on objects than they have undergone. It also means engaging with the human body and its affordances, with our health and our ease and our comfort, with our working environment, with our lungs and our skin and our bones.”



“I hope you are the kind of person that can do it’





L U C I

