Livecoding for a Future of Smart Products

ICLC 2017
Morelia,
Mexico

A Design Science Fiction Workshop

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"hello world" by Windal Oskay https://www.flickr.com/photos/oskay/472097903

Goals

Part I: Futuring

Explore our own expert knowledge (assumptions and potential blindspots)

Use some basic tools of "futuring" and design fiction to generate a timeline of interesting and relatively plausible events from now until 10 years in the future

Using the timeline to develop a few future scenarios, described in short synopses

Part II: Livecoding Futures

Identify key examples of livecoding situations and setups

Identify some situations where livecoding might be useful

Start developing frameworks for livecoding product (modes, situations, etc), rules for engagement

Please take a few minutes to add your details, then tear this sheet out on the dotted line and affix it to the wall under "people"

My name: ----------

Occupation: ----------

Institution: ----------

Email: ----------

Main areas of study or work or practice:

Years of experience in these areas:

[0-2] [3-5] [5-7] [7-9] [10+]

Areas of expertise (not necessarily the above):

Data privacy and retention policy:

Data will be used for PhD and academic research, stored on secure Google Drive and not shared except with participants.

We will delete all user data within 4 months unless you put a check mark on your card signalling consent to be contacted and identified and even potentially take part in future.

Scenario Planning / Futuring

1950's-1990's

"the use of alternative stories about the future, many with improbable and dramatic twists, to develop strategy"

- Art Kleiner

Dr. Strangelove (by Stanley Kubrick)

US Military
Rand Corporation
Royal Dutch Shell

↓

Peter Schwartz,
The Art of the Long View

Herman Kahn

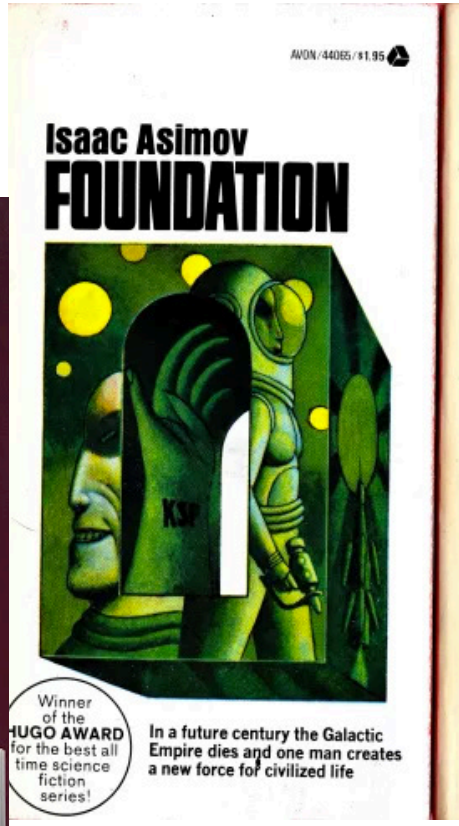
https://www.strategy-business.com/article/8220?gko=0d07f

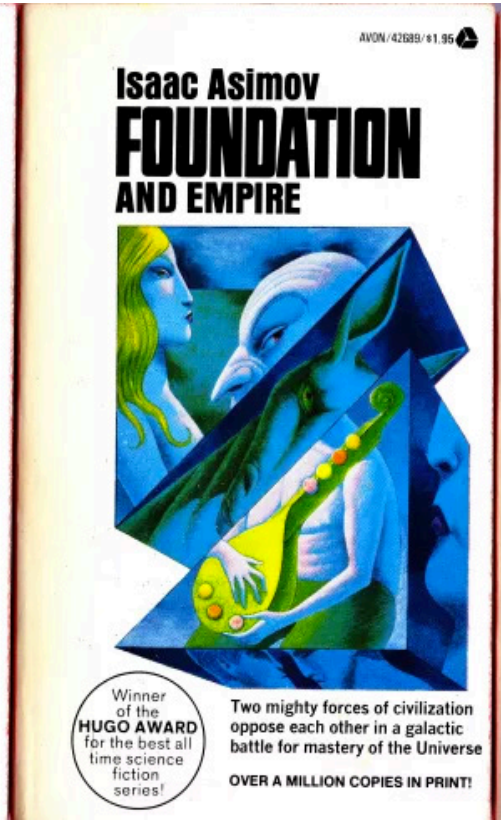
https://www.sbs.ox.ac.uk/school/news/oxford-futures-library-unveils-rare-footage-scenarios-planning-pioneer-pierre-wack

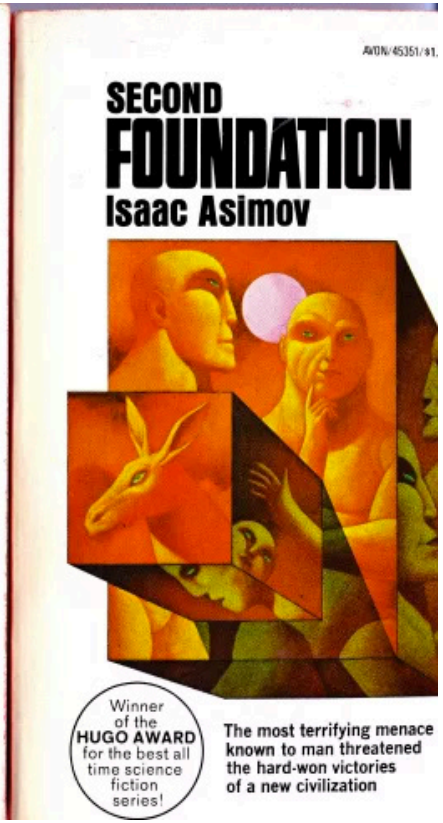
Pierre Wack

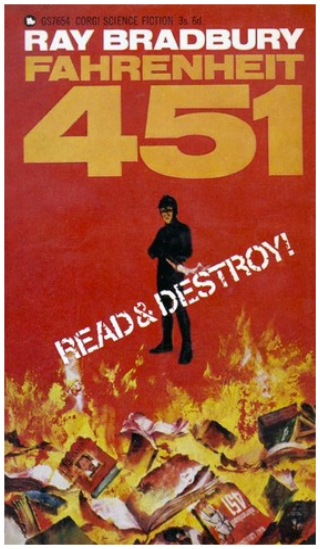
Science Fiction to Speculative Design

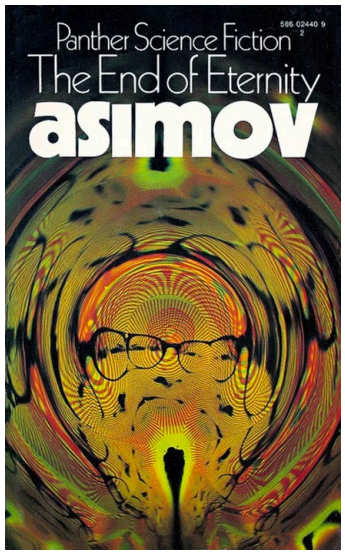
NuturePod by Stuart Candy (2017) from https://futuryst.blogspot.co.uk/



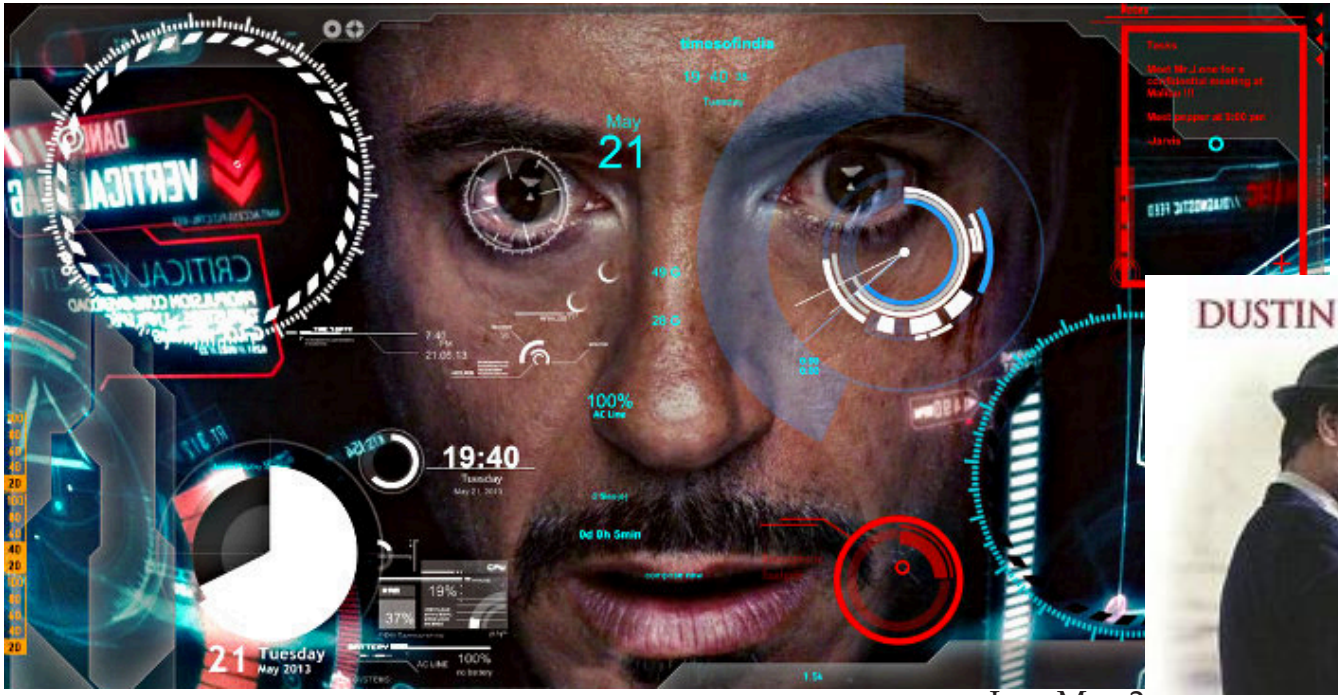




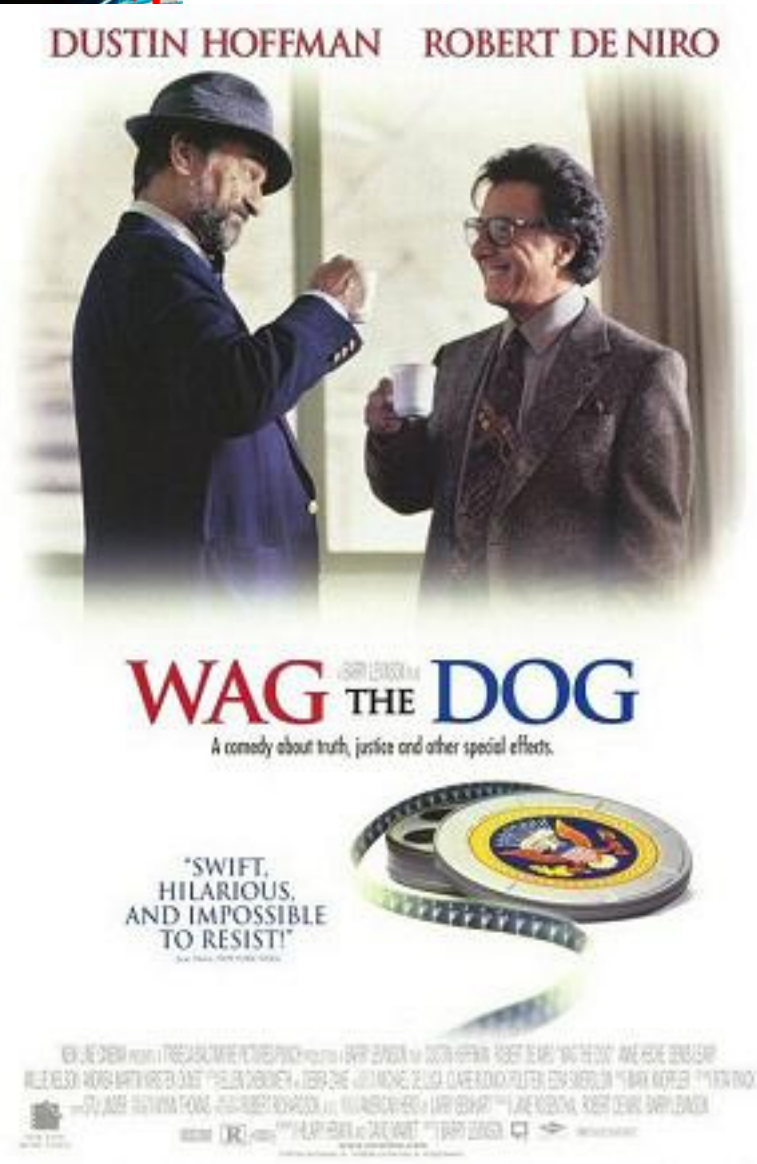




https://commons.wikimedia.org/w/index.php?curid=44036969

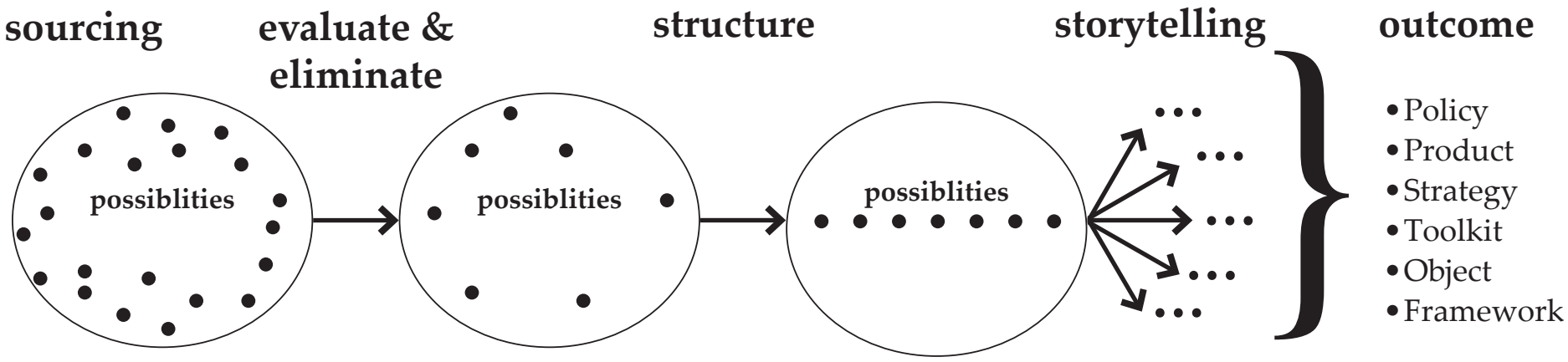


Iron Man 2



Sci Fi Interfaces (Iron Man, Minority Report) and Speculative Realism (Wag The Dog) in film

Futuring --> Applied Science Fiction Writing



(this can be done by computer modeling)

Continuous / on-going: Process, information gathering, sense-making, not just storytelling.

Looking at weak/strong signals

Not literal a future: a discussion around present to develop future strategy

Explore latent links between ideas and make new ones

Explore archetypes and use in the design process (Schön)

Future(s) as Metaphor(s)

Schön, D.A.
The reflective practitioner: how professionals think in action. Temple Smith, London (1983)

Goal: Not to *predict* the future but to understand how *to get to preferred futures*

Sourcing Tools -->
Ideation/categorisation

STEEP + V

Social	Aging populations; war refugees
Technological	AI assistants; new livecoding environments
Economic	automated manufacturing; freelance culture
Environmental	climate change; desertification
Political	government shrinkage; corruption; nationalism
Values	ethics; changes in ideology (rise of nihilisim)

Exercise: Listing areas of research / concerns / issues:

Consider STEEP+V categories. In *your* area of expertise, please list:

Important (fundamental) areas of research, concerns, or key issues:

1) _____

2)_____

A trivial area of research, concern, or minor issue:

1) _____

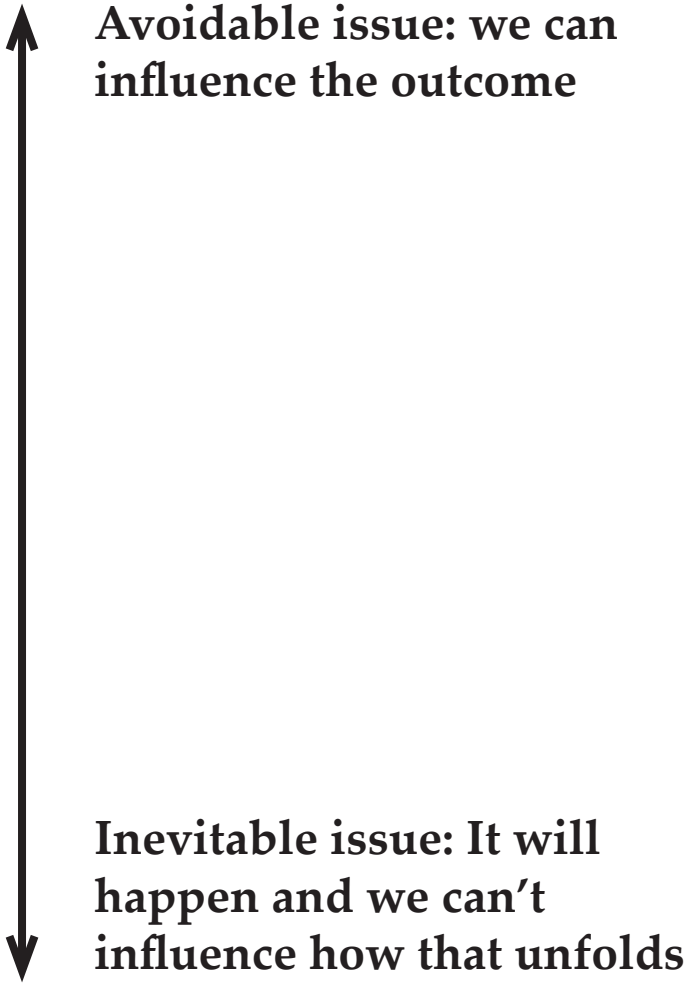
List 2 areas of concern outside your area of expertise that you think we should be exploring further:

1) _____

2)_____

Tools: Charts

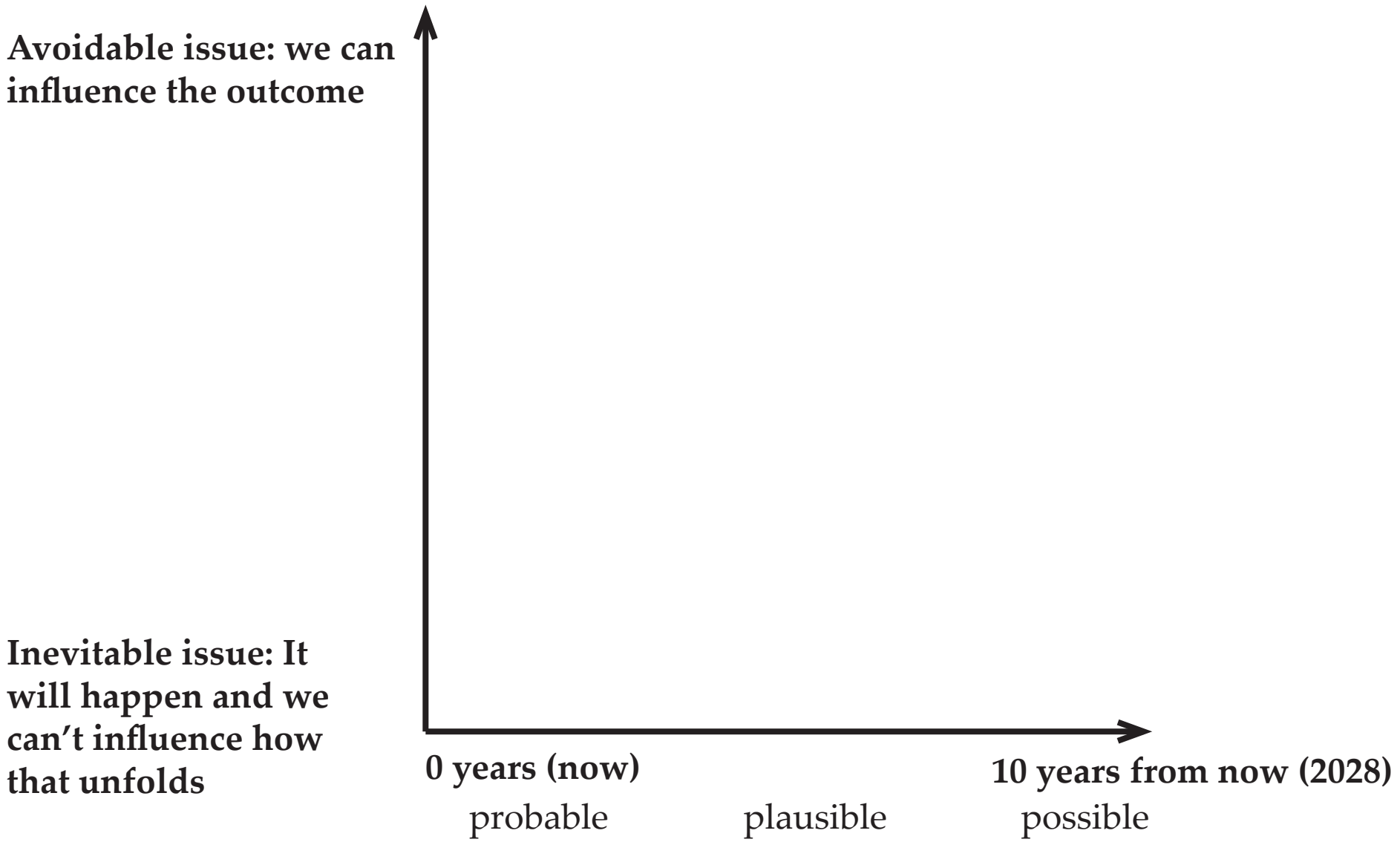
On the wall, place some Post It notes with your issues or concerns. Put them according to how much agency you think we have with them across the top/down axis:



Tools: Timelines

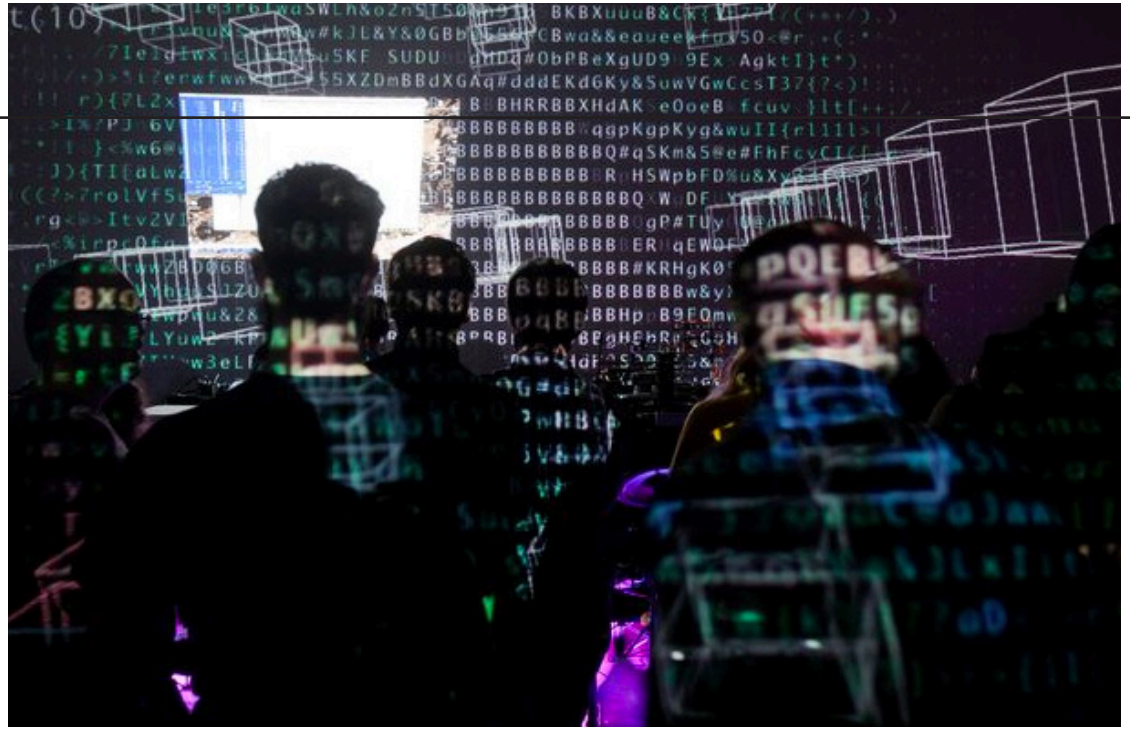
Tools: Charts

Rate how well we can affect each of these issues or conerns on the wall chart:



What is livecoding?

Setting the project boundaries.



Functional: Livecoding is the live performance of coding: manipulating code (or code-like processes like algorithms) in front of others*.

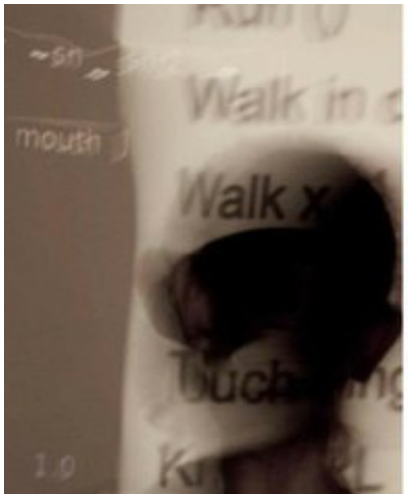
Livecoding as a community of practice (Lave & Wenger '98; Gil Nah '08):

knowledge: coding skills and live performance practice of visuals and music and choreography (any/all); ...more

practice: live programming of visuals and music and choreography; software installation and management; going to concerts and events; ...more

community: algoraves; Slack group; github and software sharing; regional and international live events; ...more

identity: regional identity but shared performance aesthetics; stickers; casual dress; irreverent humour; hacker ethos



Nick Collins (2011), TOPLAP, Andrew Sorenson, Ben Swift and others

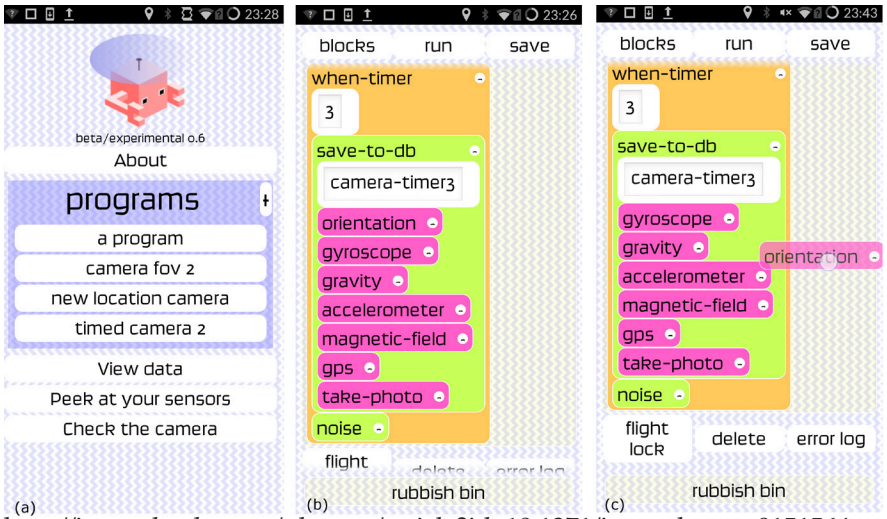
Top image: http://www.sheffafter5.com/entertainment/preview-algomech-festival

Bottom image: http://algomech.com/2016/artists/kate-sicchio/

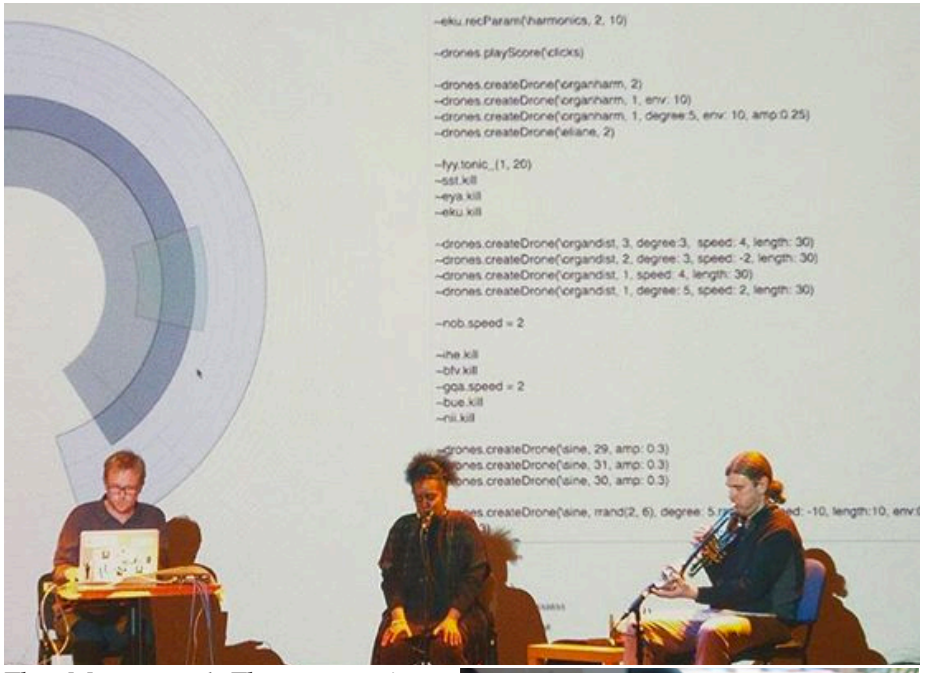
Livecoding vs. Interactive Programming

A quick discussion to set the project boundaries.

Livecoding or not...



http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0151564



Thor Magnusson's Threnoscope in performance by Peter Babusak (@ basslinemanager)

http://www.ebay.co.uk/itm/FLOWN-MIR-COMMANDER-A-VOLKOV-CALCULATOR-/272058501564

http://davesblog.fo.am/2017/11/how-to-design-a-tangible-programming-language-pattern-matrix-at-algomech-part-2/

Livecoding as *performance*

Borrowing from performance arts,
the different phases of livecoding:

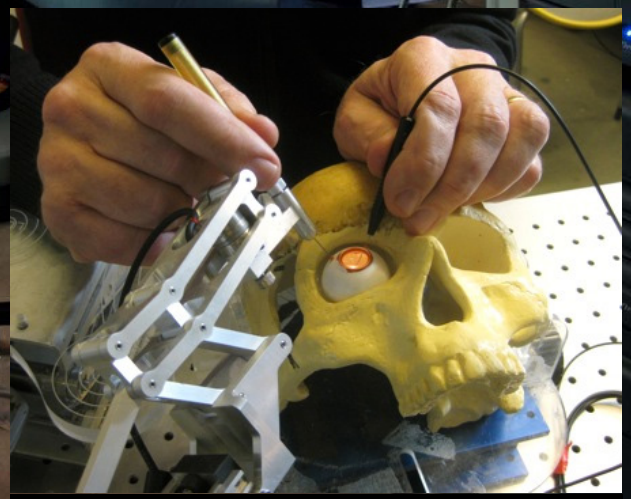
1. Composition (Play)
2. Rehearsal
3. Performance

Preparation of “turns”:
routines / functions / processes / methods

process-based art practice

Medical Livecoding?

Medical “performance”



JHU Steady Hand-Eye Robot. Photo: Marcin Balicki

JHU Steady Hand-Eye Robot. Ph https://medium.com/ogilvylabs/should-you-be-scared-of-robotic-surgery-65c775db5c57 oto: Marcin Balicki

Discussion: Borders / Edge Cases

What are some of the boundary issues around high-stakes livecoding, like medical or disaster situation livecoding?

Notes:

Tools: Context

Pick 2 contexts:

home
office
military
industry
entertainment
performance
medicine
science
other _____
other _____

Leading to adding “characters” in the scenario - personalising them, adding more individual meaning to general ideas. Fundamentally incorporate people in future designs (HCD)

Developing themes / contexts

In groups: Looking at relevance to livecoding.
Take situations/contexts and give short examples of people livecoding in them: *write a sentence; make a list of acctions & highlights; draw a picture or short storyboard*

Design for collapse - keeping products running in disaster

buildings
Drone racing

Livecoded maypole
weaving swarm robots

Disaster situations...
use smartphones from bombed out

Think: *Where* do we want our designs to be?

- Possible to Probable (speculative to predictive)
- Risky to Safe
- Think of bad / good situations

Rate from ones we **prefer** to those we should **avoid**

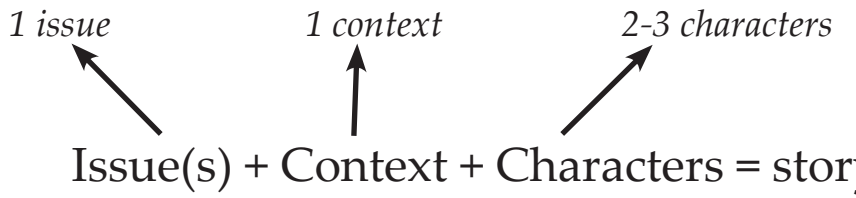
}

Map to the board

↓

Determine common properties of preferred situations

Short story synopses (time-dependent)



Sum up a possible stories for future livecoding in a sentence (or two):

Examples:
“No farms, no dirt”
“Jamie lives and works in a walled garden”
“Jim applies to the bureau of robot labour”

Using them to develop some common ideas about future uses.

Leading to specific interactions / frameworks --> rules for future livecoding.

Scenarios by Shell Corp:
http://www.shell.com/energy-and-innovation/the-energy-future/scenarios.html