What's the difference, really?

Working in MIR

Michael Stein - Native Instruments

Who am I to talk about this?

Academia	Industry
Advance the state of the art	**Sell a product for profit**
Inspire tomorrow's questions!	Be effective in execution!

Academia

Publish
Build a reputation for competence
Explore the fringe of
what's possible

High degree of personal freedom
Progressive mindset
DIY mentality
Peer group of experts

Incentives

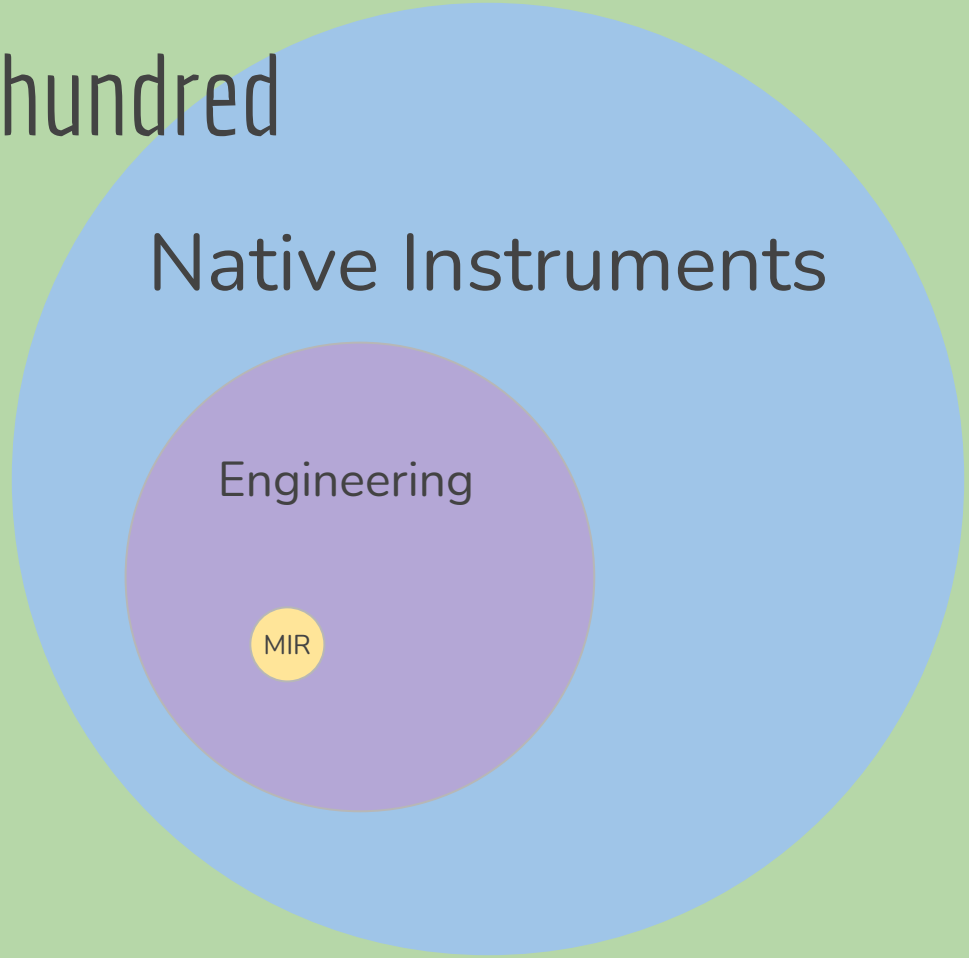
Environment

Industry

Understand customer needs
Deliver a working product on time
Make it easy and fun to use
while cheap to maintain

Team work
Conservative mindset
Hierarchies & processes
Interaction & alignment

You’re one in a hundred



Be prepared to become a “generalist”

Chroma extraction	Drum sound classification	Envelope segmentation
FX classification	Natural sound classification	Pitch contour extraction
Source separation	Active noise cancelling	Sound slicing
Pitch correction	Onset detection	Song recommendation
Voice morphing	Directional speakers	Key detection
Beat tracking	Anomaly detection	Instrument classification
Score following	Tempo detection	Audio content type tagging
Drum transcription	Sound similarity	Sound profiling

Three realities about performance:

Perfect is better.

You always strive for single digit error rates

even if that means simplifying the problem you're trying to solve.

Performance on paper doesn't matter.

You test, and test and test again

on the most challenging data you can find.

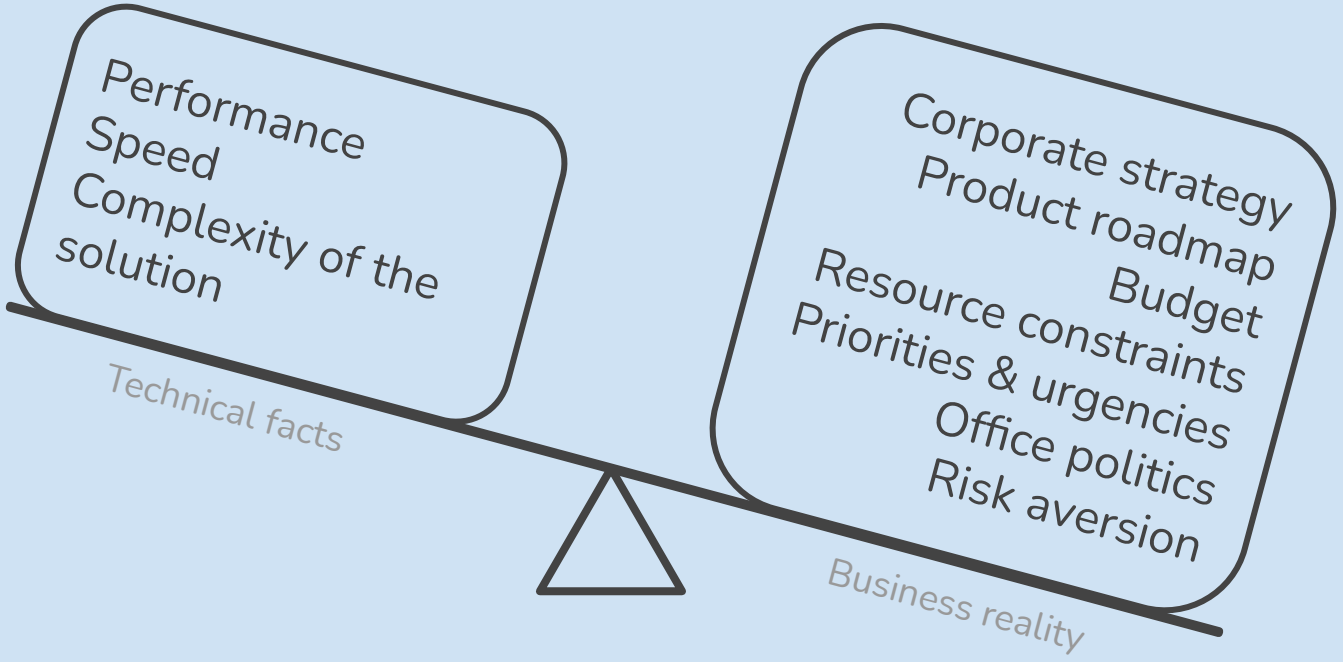
No buttons.

∅

Well, maybe one.


TRAKTOR DJ
Aquarius Earth - Birth
Native Instruments
SYNC
2m
122.0
+40.2%
GAIN
HI
MID
LOW
FLTR
-1:59
FLX
Indigo Dust - Fields Of Cream
Native Instruments
SYNC
1m
122.0
0.0%
-2:07
FLX
Transients and downbeat
Key and tempo
Recommendation
CUE
COLLECTION
Tracks
PLAYLISTS
Playlist 3 17
Berlin 8
Los Angeles 8
New Playlist
TITLE
ARTIST
BPM
KEY
Deep Matter - S42 Ring Native Instruments 124.0 4m
Golden Kingdom - Ground Zero Native Instruments 85.0 12m
Golden Kingdom - Lights Out Native Instruments 87.0 12m
Indigo Dust - Blumental Native Instruments 125.0 12m
Indigo Dust - Fields Of Cream Native Instruments 122.0 1m
Infamous Flow - Dippy Native Instruments 89.0 12m
Infamous Flow - Mercy Native Instruments 91.0 2m
Timeless Glow - Lisa Native Instruments 125.0 4m
Timeless Glow - Mine Native Instruments 122.0 10m
MATCH, BASED ON
Aquarius Earth - Birth
Native Instruments
Astral Flutter - Hungarian Nights Native Instruments 90.0 2m
Astral Flutter - Starry Monkey Native Instruments 90.0 11m
Aquarius Earth - Relax Yo Self Native Instruments 87.0 3m
Golden Kingdom - Ground Zero Native Instruments 85.0 12m
Infamous Flow - Dippy Native Instruments 89.0 12m
Golden Kingdom - Lights Out Native Instruments 87.0 12m
Infamous Flow - Mercy Native Instruments 91.0 2m

Success is a matter of timing … and other factors



How much will it cost to put it in?

How much will it cost to support it?

What else could we do with the same amount of time & money?

The first rule of working in MIR:

Advantage 

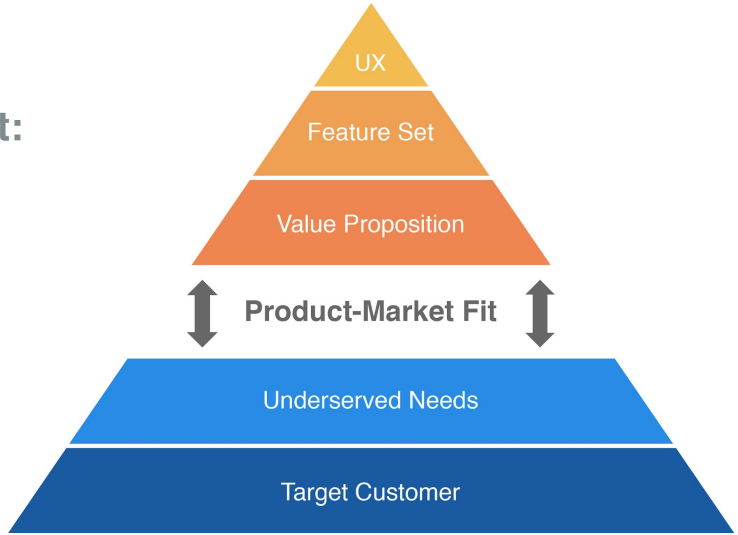
Solutions 

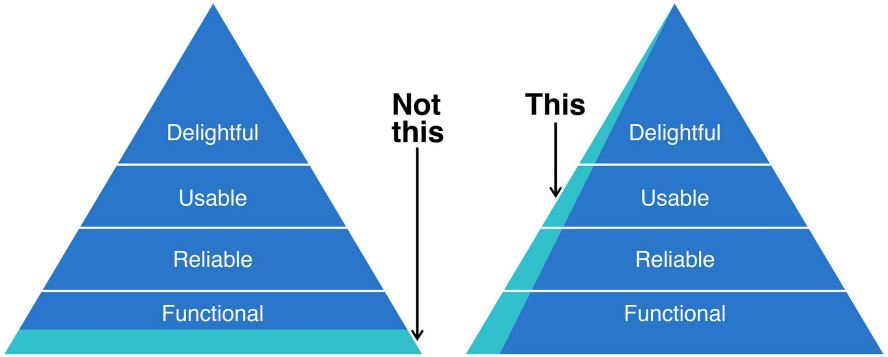
Workflows 

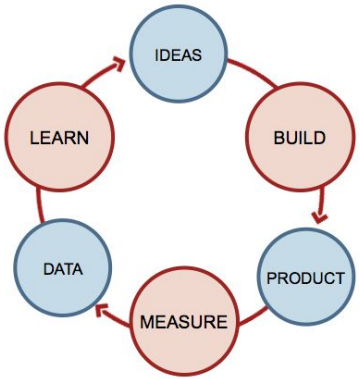
You don’t talk about working in MIR!

Ask not what ~~your country~~ *technology* can do for you, ask what you can do for ~~your country.~~ *customer*

Lean product process

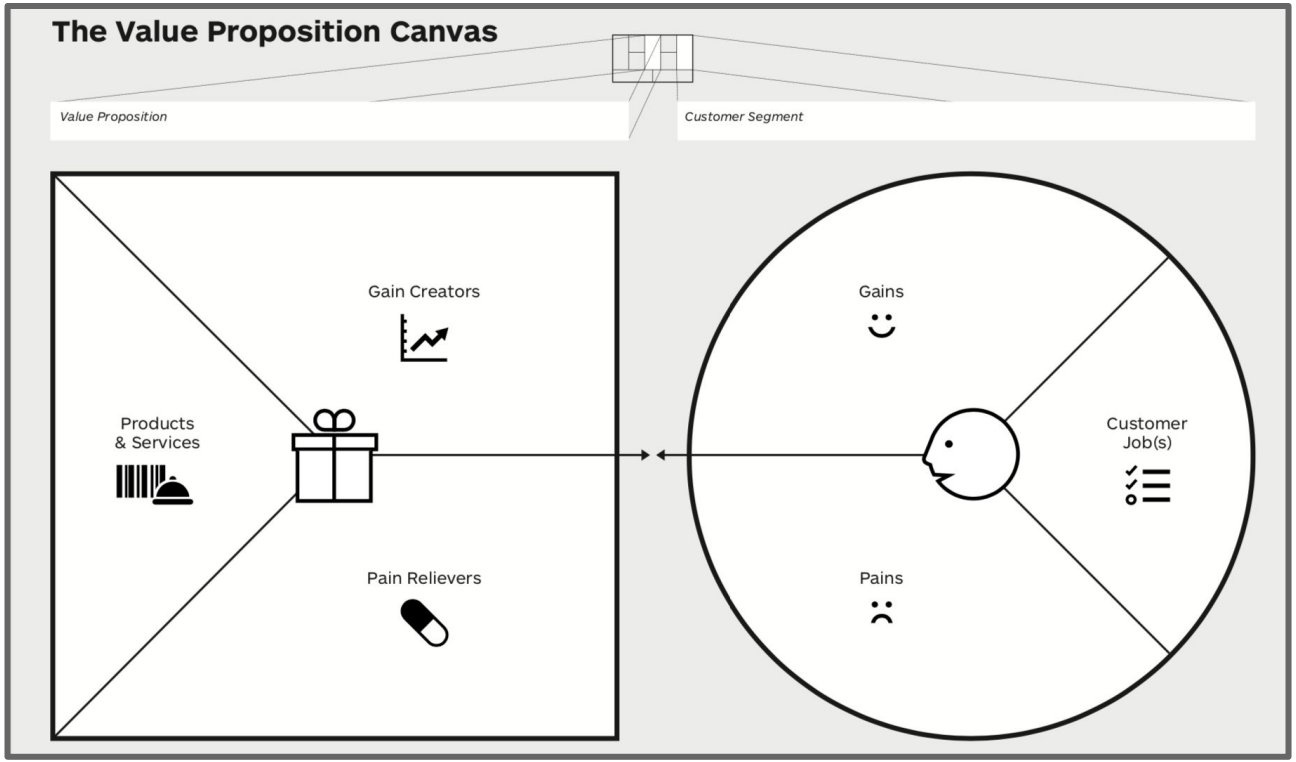






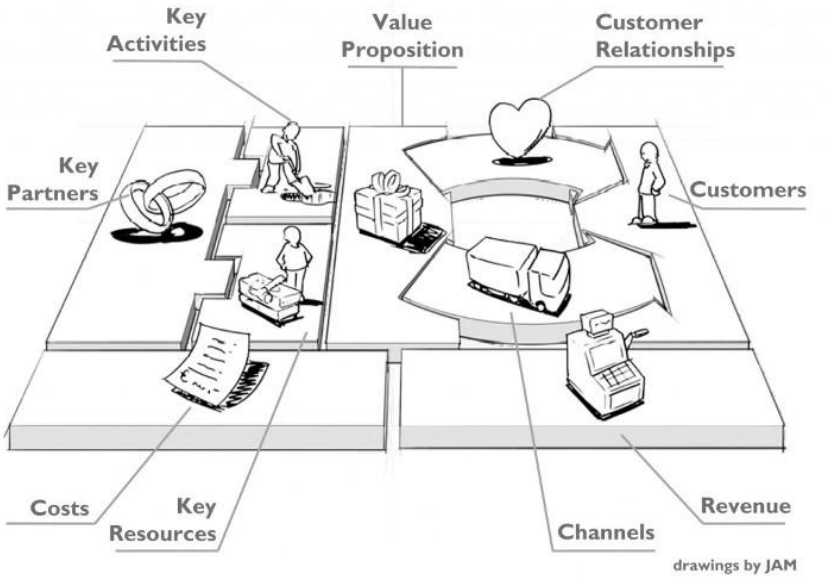
Eric Ries - The Lean Startup
Dan Olson - The Lean Product Playbook

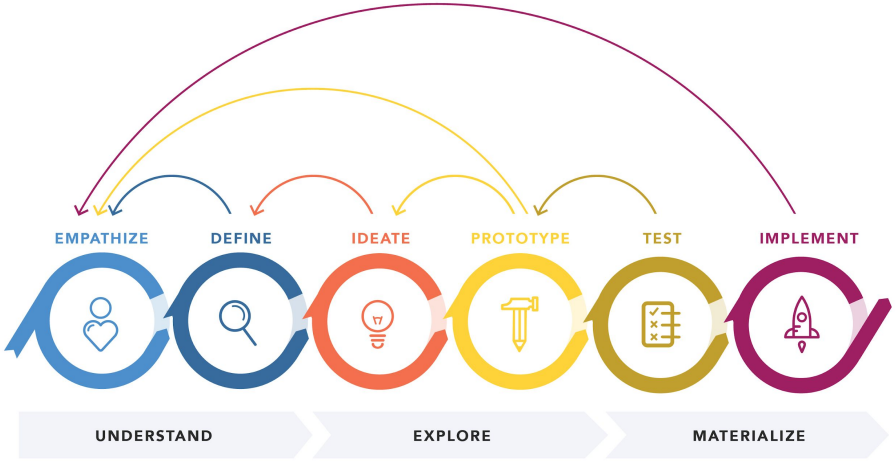
Value proposition design



Alexander Osterwalder - Value Proposition Design

So you want to be a pro?!





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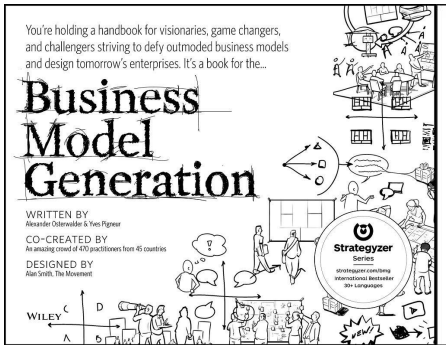

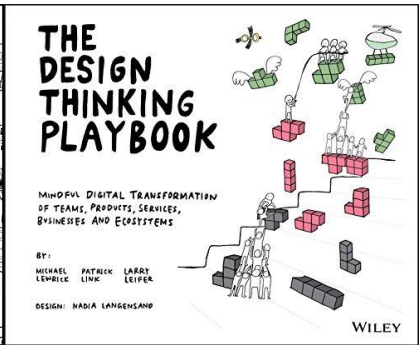

Alexander Osterwalder - Business Model Generation
Michael Lewrick - The Design Thinking Playbook

A simple starter: opportunity solution trees

1 What's something that you want in life?

2 What would that do for you?

3 How else could you achieve that?

Find out more here: https://www.producttalk.org/2016/08/opportunity-solution-tree/

Case study: sounds.com

Product vision

All the sounds and tools you need to create the future of music.

Key insights from user research

1. Speed is everything
2. Two mental states: finding vs exploring
3. Relevant results
4. Single access point to all content

MIR objectives

1. Make all content easily retrievable
2. Finding sounds fast and intuitively to maintain creative flow
3. Discovering sounds for inspiration

Make all content retrievable so that a user can find any sound and our suppliers can monetize their assets.

Quantify asset accessibility

- Dashboard for tag coverage
- Define minimum asset information requirements

(Delegate) manual content annotation

- Provide an annotation environment
- Tag suggestions via content similarity
- Bulk edit sounds in the back office
- Report wrong metadata from the user front-end.

Improve ingestion analysis

- Add auto tagging tools to increase coverage
- Improve auto tagging accuracy
- Improve string analysis
- Tag suggestion based on collection context
- Fuse knowledge sources

Engage suppliers for annotation

- Raise awareness for good metadata
- Provide an annotation interface
- Show how metadata quality converts to revenue

So what's the difference, really?

	Classic R&D lab approach	User-centered approach
Non-functional prototypes	~5	~20
Functional prototypes	13	6
Released in product	31% [4]	83% [5]
Average time to market	2 years	2 months
Average releases per year	1	4

Never give in to “But you can also code?!”
Because you’ll hardly do anything else
in the foreseeable future.

Image references

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