

From 'Fog of War' to Reducing Noise in Daily Operations

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OVER THE **LAST TWO YEARS** ALONE **90%** OF THE DATA IN THE WORLD WAS GENERATED



EVERY MINUTE OF EVERY DAY:

Snapchat users share 527,760 PHOTOS



Users watch 4,146,600 YouTube videos



Instagram users post 46,740 PHOTOS



More than 120 PROFESSIONALS join LinkedIn



15,000 GIFs are sent via Facebook messenger



There are 154,200 CALLS on Skype



456,000 TWEETS are sent on Twitter



There are 990,000 Tinder swipes



We send 16 MILLION text messages



103,447,520 SPAM emails are sent



156 MILLION emails are sent; worldwide it is expected that there will be 2.9 billion email users by 2019



The Fog of War



Maybe you're thinking, duh...

/me Removes sunglasses dramatically.



BAO XUELIN/China via The Associated Press file

The Chinese missile frigate Yulin fires an anti-surface gun battery last month during exercises with Singapore's navy in the South China Sea. Some analysts fear China is elevating its presence in the sea so it can conceal its submarines.

ASIA

China may be using sea to hide its submarines

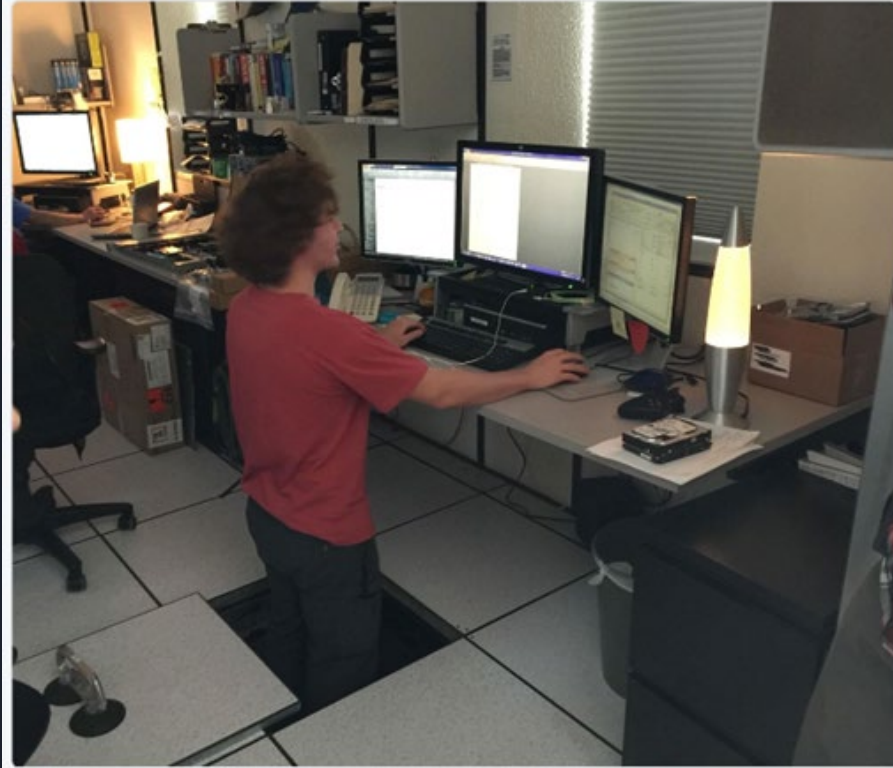
...but we have to learn to think differently.

But we don't want you to feel like this...



Ready to take things to the next level?

Standing desk hack level 9000.





Bottom Line Up Front (BLUF)

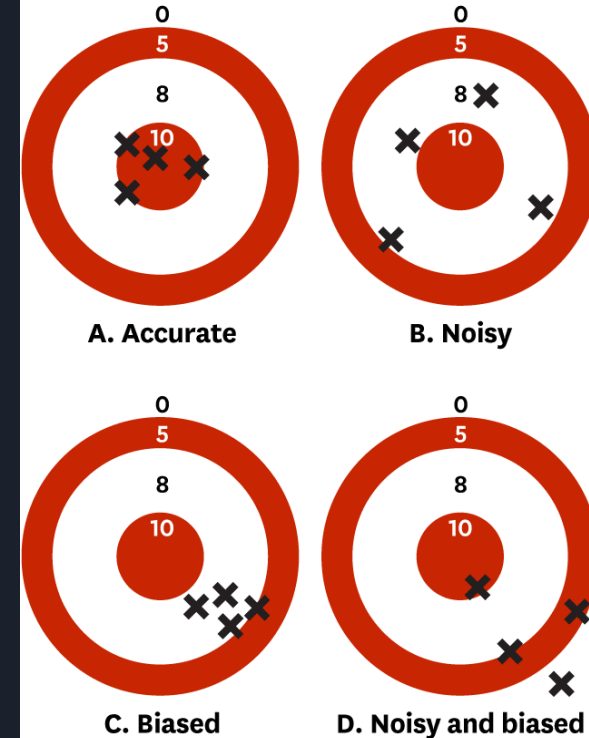
- **The Problem:** Information overload, bias and inconsistency reducing the quality of human decision-making.
 - 'Fog of war' and 'noise' as metaphors for an exponential increase in complexity which influences decision fatigue and uncertainty in decision-making.

- **Toward the Solution:** Learning to reduce noise and bias, isolate important outcomes and ignore the rest.
 - 'Clarity' and 'signal' as metaphors for the rapid improvement of human-machine decision capabilities + new mental models for getting there.
 - Planting the seed, individually
 - Planting the seed, organizationally

Bias vs. noise

- **Bias**: In a nutshell: If you have strong opinions about COVID-19 and then you go looking for evidence that supports them, you'll think you see it... no matter how outlandish those opinions are. You'll also have a harder time absorbing evidence that points in the opposite direction.
- **Noise**: Erratic factors which reduce decision accuracy
- Humans are unreliable decision makers
- Strongly influenced by irrelevant factors, such as... **Current mood, Time since last meal, The weather**
- Noise is far above the level that executives would consider tolerable—and they are completely unaware of it.

How Noise and Bias Affect Accuracy



SOURCE DANIEL KAHNEMAN,
ANDREW M. ROSENFELD,
LINNEA GANDHI, AND TOM BLASER
FROM "NOISE," OCTOBER 2016

Noise Cont...

- Noise Audits
- Unlike bias, noise can be measured without knowing what an accurate response would be. **To illustrate...**
- The ultimate goal is to improve the quality of decisions
- Not just reducing uncertainty for the policymaker, but improving the decision quality of the analyst herself
- Better decisions are not achieved merely by reducing general biases (such as optimism) or specific social and cognitive biases (such as discrimination against women or anchoring effects)



How to *eliminate* bias and noise?

**MACHINE
LEARNING**

*Do Stupid
Things
Faster
with More
Energy*



@quaesita

How to reduce bias and noise?



Data-driven decisions (human in the loop)





Data-driven Decisions (vs. Data-inspired)

Data-Driven

- Solution: set the goalposts in advance and resist temptation to move them later
- In other words, the decision-maker has some homework to do *before* anyone analyzes the data, which will drive the decision confidence
- *“I recently went clothes shopping in Brooklyn with my friend [Emma](#). Showing off a pretty dress, she tugs at the pricetag on the back. ‘Hey, what does this say?’ she asks me. ‘If it’s less than 80 bucks, I’ll buy it.’” – Cassie Kozyrkov, Google Chief Decision Scientist*

VS.

Data-Inspired

- *Using data like that to feel better about actions we’re going to take anyway is an expensive (and wasteful) hobby*
- *Don’t form an uninformed opinion and then go foraging for media that confirms your views. you’ll just confirm whatever you wanted to believe.*

Steps to Good Decisions (Decision Intelligence) mental model

(0. Remove Chaos - reduce or outsource irrelevant decisions (clothes, food) if they contribute to your decision fatigue)

1. Understand you are an irrational person and accept uncertainty
 - a) Humans generally suck at making probability estimates because they are inherently biased based on personal experience
2. Understand yourself and your objectives
 - a) "Under what circumstances, if ever, am I willing to put a stranger's life at risk? How much risk?"
 - b) What are my ethics? Values?
 - c) Don't 'should' all over yourself...
3. Consider potential actions (the goalposts)
 - a) "Is making a careful decision about it important to me?"
 - b) If you struggle with this, think about what you DON'T want to do - try visualizing a scenario in your head and simulate which decision disappoints you more
 - c) "What would I do if there were no COVID-19?"
 - d) "Could anything convince me to do it?"
4. Choose action triggers (decision criteria)
 - a) Default action (null hypothesis): Not to mask
 - b) Alternative action: Mask
 - c) Information that triggers change: Evidence that masking works
5. Choose minimum quality of sources (Think BEFORE gathering info - helps immunize you against confirmation bias)
 - a) Laws? New research? Trusted advice? Cost? Quality of masks?
6. Gather information
7. Act (or don't)



Practical Tips

- Identify what you are most vulnerable to
- Gather data central to that topic
- Take time to assess possible outcomes
- Narrow the body of implications
- Decide, Act

What if you're like... I am 31337...?

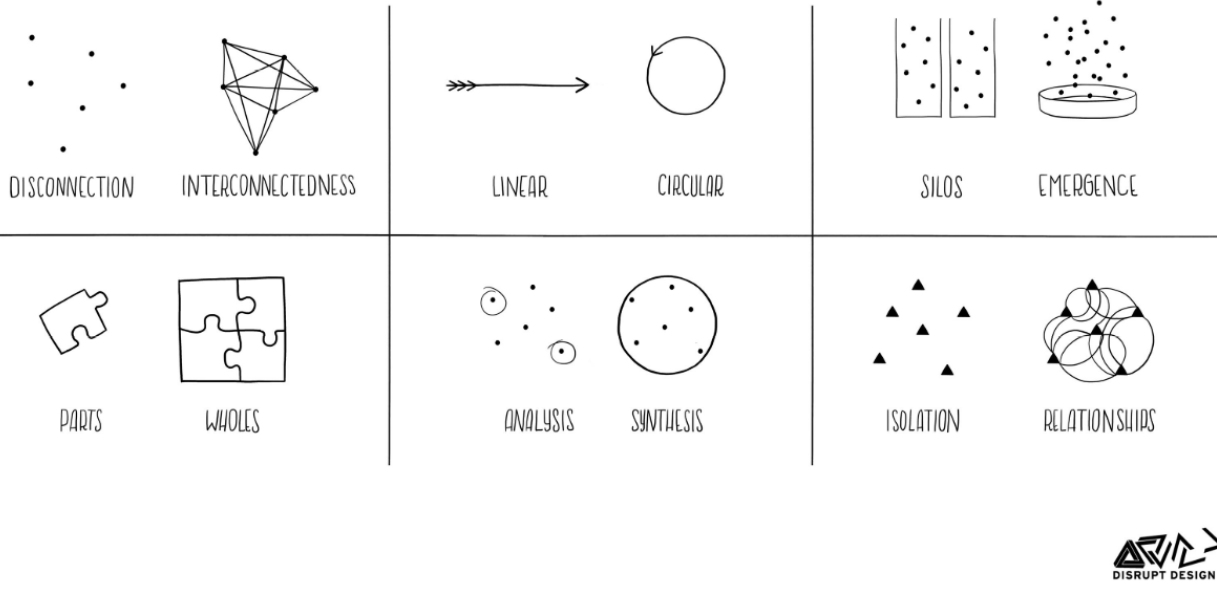
I AM A HAXOR



Advanced Thinking Tooling



TOOLS OF A SYSTEM THINKER



Use trusted sources

- Emergent Risk International
- OODA Loop
- Farnam Street
- Living Security
- Recorded Future
- Proofpoint
- Domain Tools
- CrowdStrike
- MEMRI
- Soufan Group
- NJCCIC
- IC3
- And many others...



Executive Summary

- Market volatility continued today, with mild recoveries to stock prices, but weighed down by continuing worries about an oil supply glut and the impact of increasingly draconian measures to stem the spread of the virus in Italy.
- Italy's lockdown will affect economic activity across the country, although local residents are still permitted to travel to and from work. International flights reportedly continue, but all personnel leaving the quarantine area are expected to submit to health checks first.
- Companies across sectors are feeling the sting of a likely bear market and consumer reticence to travel amid mounting cases in the US and Europe.
- Work and daily life appear to be resuming in some parts of China, although Beijing remains cautious about too quick a resumption. Opacity in reporting continues to obscure the full picture

From the Media

COVID-19 cancella... COV ⓘ ⋮

COVID-19 Cancellation Tracker - forbes.com
Tue, 10 March, 2020
Millions of people have been forced to change their plans as live events around the world are cancel...

Airlines reduce flights due to financial pressures from ...
Tue, 10 March, 2020
Multiple U.S. airlines have announced they will reduce flight offerings, freeze hiring and even cut ...

Convention & Visitors Bureau, City of Huntsville respond ...
Tue, 10 March, 2020
HUNTSVILLE, Ala. (WAFF) - Following the Association of the United States Army (AUSA) announcement th...

Bay Area COVID-19 closings: Concerts, fests, school events
Tue, 10 March, 2020
With Santa Clara County announcing a mandatory ban on all gatherings of more than 1,000 people, gro...

These Credit Cards May Come In Handy If You Are ...
Tue, 10 March, 2020
Your credit card may have benefits that will help if you get quarantined due to COVID-19.
Page: 1 2

Business Dynamics

General Industry Supply, Logistics and Medical ⋮

Global markets are highly likely to remain susceptible to COVID-19 induced volatility as geo-political events combine with disease outbreaks and government responses to amplify uncertainty and confusion. The large economies of East Asia may be close to restarting, but Italy's nationwide lockdown will have repercussions across Europe, and supply delays from China are beginning to have a flow-on effect to other Asian manufacturing nations.

Economic Stimulus: More countries are announcing or planning economic stimulus to protect their economies from the global economic impacts of COVID-19. The White House and congress will meet today (Mar 10) to discuss possible stimulus to offset impacts from COVID-19, specifically a payroll tax cut, assistance for hourly wage workers and cheap loans for small businesses. The Democrat-controlled house is pushing for expanded coverage of paid sick leave to be included in stimulus measures. The Japanese government on Tuesday (Mar 10) approved a \$9.6 billion plan to support small and medium-sized enterprises and self-employed workers affected by COVID-19 through low interest loans. EU governments have started to unveil stimulus packages as well, though of varying scope. For example, Ireland's \$3.1 billion stimulus amounts to four times larger per capita spending than Germany's plan.

Stock Markets/Finance: Major US stock indices rebounded at open on Tuesday (Mar 10) to climb from near bear market to notch gains of around 3% across the board at time of publishing. Stock markets in Asia and Europe closed slightly higher as well, making up for the historic losses the previous day. With significant uncertainty about the future of COVID-19 and possible government economic and disease containment measures, markets are expected to remain volatile. Volatility in the stock market and general economic uncertainty has restricted corporate bond market liquidity, making it more difficult for companies to obtain loans to fill short term revenue needs created by COVID-19. Major banks are arranging alternative work sites and remote working to ensure their operations can continue smoothly should their downtown offices in New York and London.

Agriculture and Food: Food prices in China in February rose 21.9% from the year previous, higher than January's jump of 20.6%, due to transportation restrictions, production suspensions and hoarding. The epidemic has also cooled expected global

Verizon VPN 17:27 32%

Search

Write a post

Meredith Wilson • 1st
CEO, Founder; Intelligence thought leader
5h • 🌐

Our **#data** and **Emergent Risk International Situation Rooms™** partner **Knoema** has some great free data visuals available on its website related to **#cov** ...see more

Novel Coronavirus (2019-nCoV) Cases and Deaths

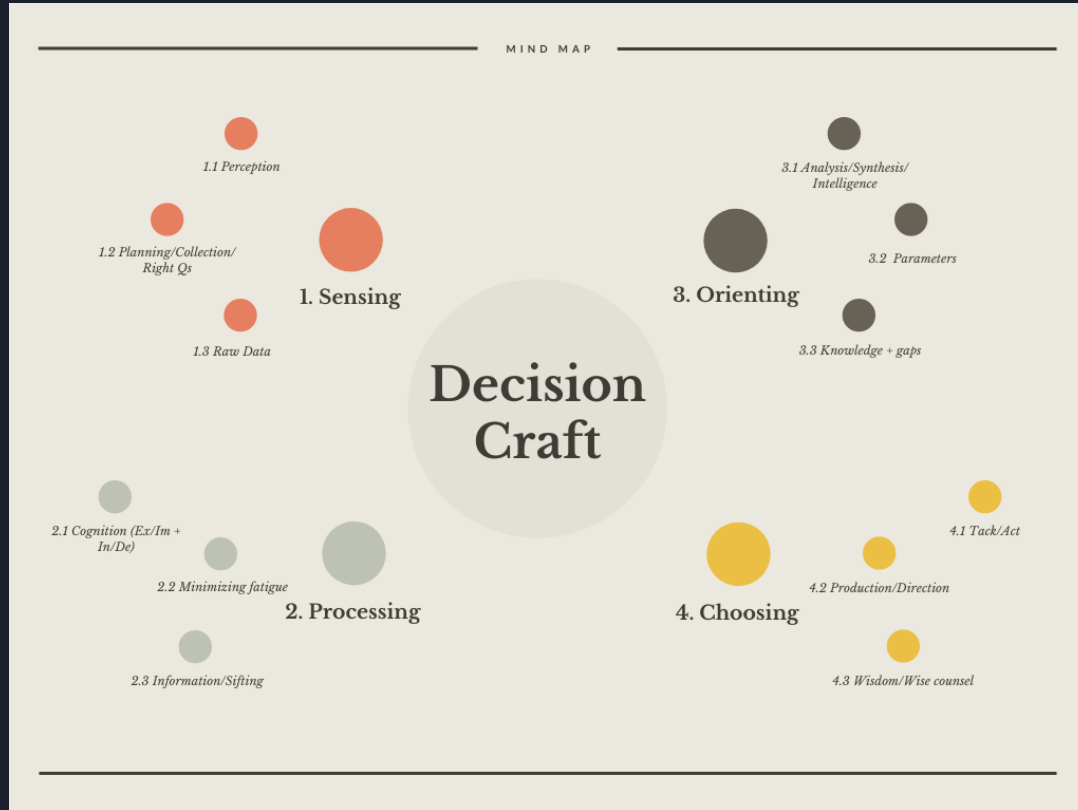
% Change of Stock Indices and Oil Prices Since Jan 22, 2020

S&P 500 -27.81	FTSE 100 -32.90	Crude Oil WTI -64.10	2019-nCoV Cases 32,607.57
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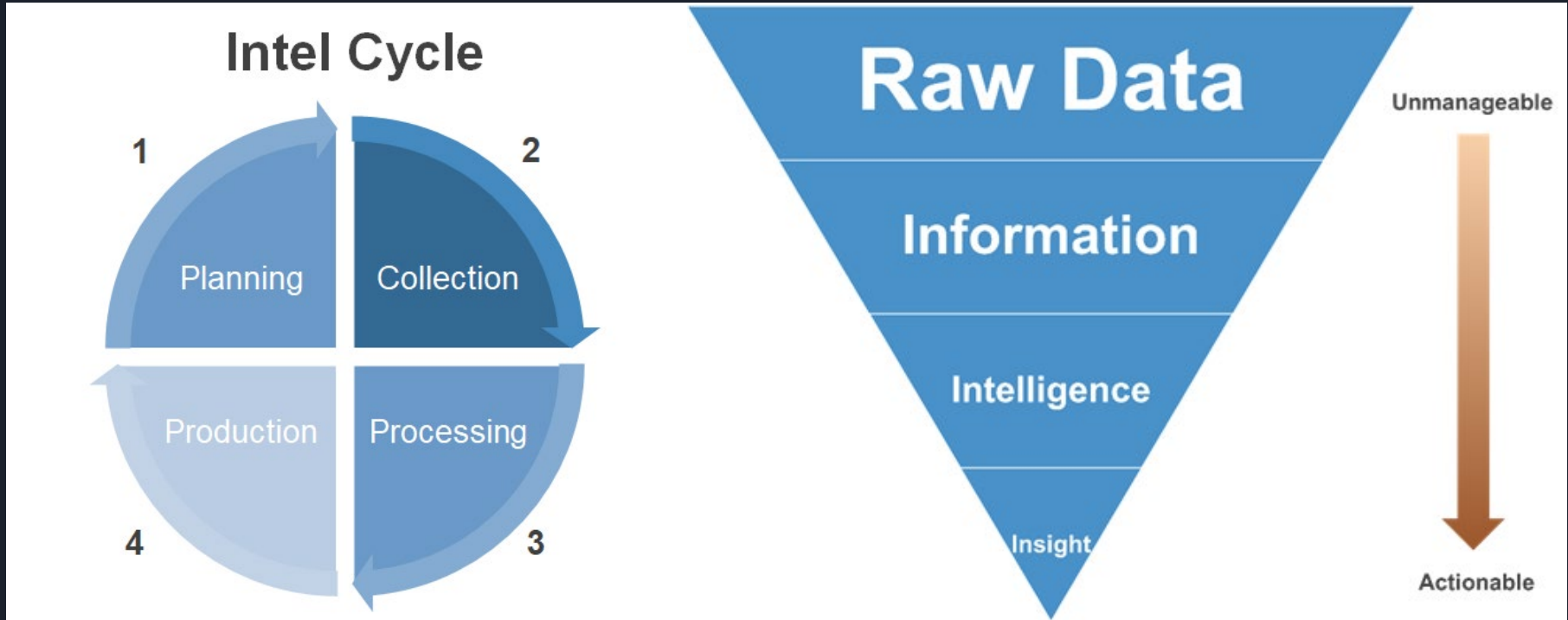
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Human decision-making (cognitive psychology)



How spinning the intelligence cycle helps you eliminate noise... (Threshing Floor)



PIRs for security & business

ENEMY OFFENSE

PIR: "Will the enemy launch a regimental- or battalion-size attack within my sector in the next 12 hours?" - Commander

Indicator: Reconnaissance and destruction of our defensive obstacles.

NOTE: Usually the night preceding an attack, enemy patrols reconnoiter friendly obstacles to determine a plan for clearing lanes. The patrol destroys only those obstacles that will not disclose the direction of the main attack. - Threat Knowledge



What emerging threats or vulnerabilities from the last 90 days must general end users understand?



What are some new threats and vulnerabilities?



Why?

- Improve decision outcomes
- Reduce decision fatigue
- Learn from mistakes
- Mitigate risk
- Enable competitive business decisions
- Reduce stress
- Save money, time & jobs



But what if my organization is still foggy?

A person is seen from behind, sitting in a small, narrow boat or raft. The boat is packed with gear and supplies. They are navigating a narrow, rocky channel that appears to be a natural passage through a mountainous, foggy landscape. The water is dark and turbulent, and the surrounding hills are shrouded in a thick, grey fog, creating a sense of isolation and uncertainty. The overall mood is one of a difficult journey through a hazy, unknown environment.

Chinese Proverb

The best time to
plant a tree was
20 years ago.
The second best
time is now.

~Chinese Proverb



Planting the Seed, Organizationally



Strengths Weaknesses Opportunities Threats

1. IT Operations
2. IT Security
3. Business Risk & IT Risk
4. Business Processes
5. External Factors

The SWOT Analysis Tool

INTERNAL	S Strengths	W Weaknesses
EXTERNAL	O Opportunities	T Threats
	POSITIVE	NEGATIVE

Lean Canvas

How to Fill in a Lean Canvas?

Uber Example

Based on Lean Canvas by Ash Maurya, adapted from the Business Model Canvas by Alex Osterwalder, licensed under CC BY SA 3.0.



PROBLEM

List your customer's top 3 problems



SOLUTION

Outline a possible solution for each problem



UNIQUE VALUE PROPOSITION

Single, clear, compelling message that turns an unaware visitor into an interested prospect



UNFAIR ADVANTAGE

Something that can not be easily copied or bought



CUSTOMER SEGMENTS

List your target customers and users

EXISTING ALTERNATIVES

List how these problems are solved today



KEY METRICS

List the key numbers that tell you how your business is doing

HIGH-LEVEL CONCEPT

List your X for Y analogy (e.g. YouTube = Flickr for videos)



CHANNELS

List your path to customers

EARLY ADOPTERS

List the characteristics of your ideal customers



COST STRUCTURE

List your fixed and variable costs



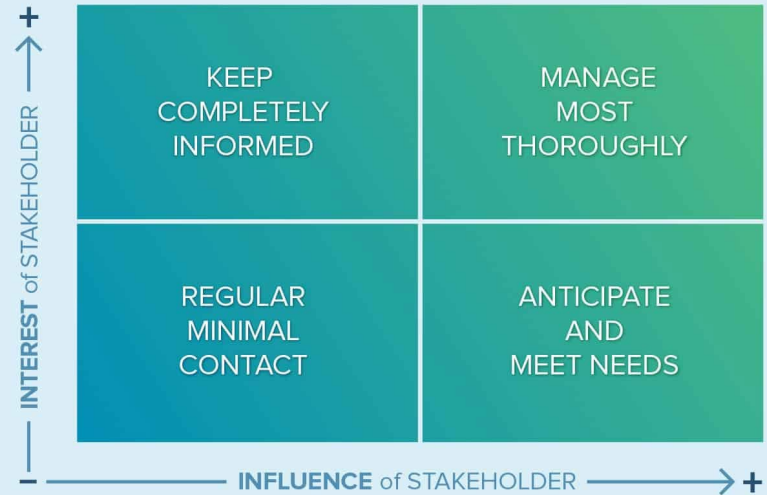
REVENUE STREAMS

List your sources of revenue

Stakeholder Analysis

1. IT Operations
2. IT Security
3. Business Risk & IT Risk
4. Business Processes
5. External Factors

Stakeholder Map: Who Needs What?



Where can we go?

PAIN IS
WEAKNESS
LEAVING THE
BODY



How can we get there?



Filter & Fine tune!





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