



CommunityRisk Reduction

Investing in your Community Risk Assessment

Using knowledge to reduce risk

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- We explored the importance of setting clear direction
- We considered the Acuity model and particularly the first element "What we know"
- We considered useful tools and techniques in examining what we
- know
- We explored what we know about Naperville in terms of FD
- activity
- We looked at relationships and how this is important in collecting and using data well
- We touched on the ethics of using data wisely

SECTION 3/1

What do others know?













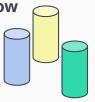


Acuity Model





What we know



What others know



What this tells us



Incident data
Fire Investigation reports
Compliance reports

Life Style Data Health indicators:

- Substance abuse
- Mental health issues
- Vulnerability
 Crime Reporting

Correlation between:

- Lifestyle and incidents
- Health and fire risk



Evaluate and learn!

Protection



Where? How? When?

Prevention



Where? How? When?

Response

Plan and deploy



Where? How? When?













Likelihood vs Impact



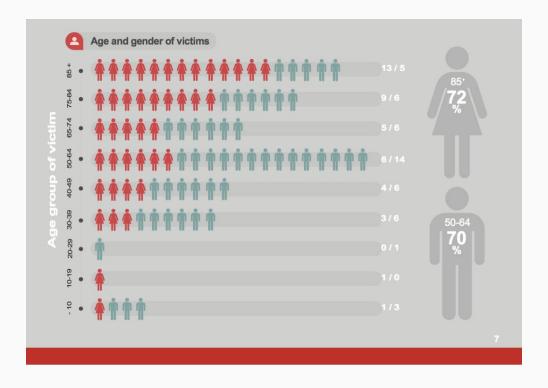


Drivers of Risk



















What is also noticeable is the number of cases where more than one factor is present.

- In 18 of the 88 (20%) cases none of the risk factors were present.
- In 26 (30%) cases one factor was present.
- In 44 (50%) cases more than one factor was present.

This has clear implications from the perspective of targeting prevention work at those who are likely to be most vulnerable.



identifying 0-6 risk factors.

Swimming in the same pool?

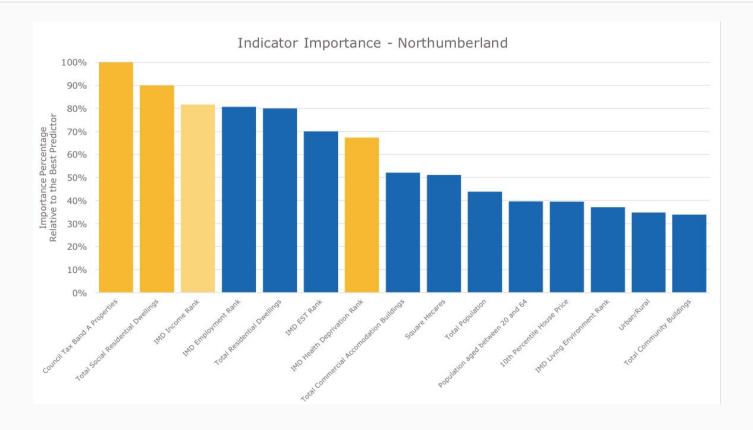
















As teams- what information do you think would be most useful to know from other agencies?









BREAK COFFEE

SECTION 3/2

What do others know? - Enriching the Picture





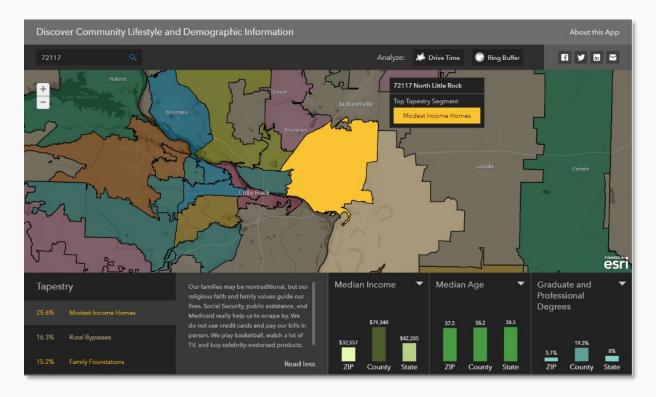








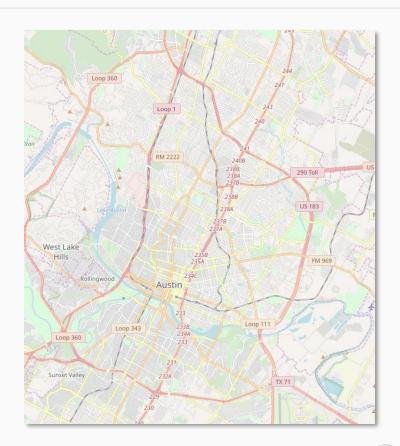




Tapestry Segmentation



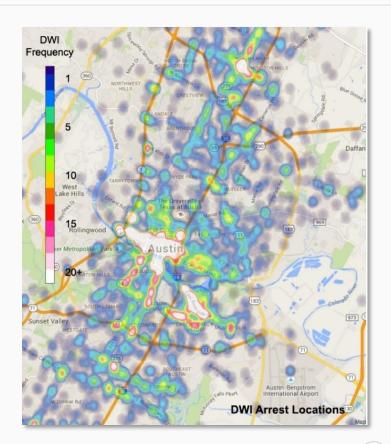




Naperville Basemap



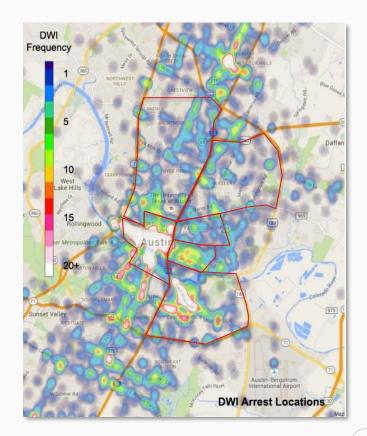




Open Source Data + Heat Mapping







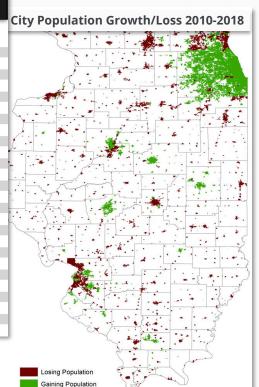
Open Source Data
+
Heat Mapping
+
Tapestry Segmentation
=
Actionable Information





Illinois cities leading in population gain 2010-18

_	Incorporated Place	2010	2014	Population Gain	Percent Gain	
1	Chicago	2,697,319	2,722,389	25,070	0.93%	
2	Naperville	142,300	146,128	3,828	2.69%	
3	Champaign	81,199	84,513	3,314	4.08%	
4	Elgin	108,304	111,117	2,813	2.60%	
5	Oswego	30,534	33,099	2,565	8.40%	
6	Aurora	198,161	200,456	2,295	1.16%	
7	Plainfield	39,950	42,138	2,188	5.48%	
8	Glenview	44,735	46,767	2,032	4.54%	
9	Bloomington	76,757	78,730	1,973	2.57%	
10	Normal	52,638	54,594	1,956	3.72%	
11	Orland Park	56,735	58,666	1,931	3.40%	
12	Elmhurst	44,184	45,751	1,567	3.55%	
13	Pingree Grove	4,596	5,878	1,282	27.89%	
14	Huntley	24,347	25,603	1,256	5.16%	
15	Yorkville	17,007	18,096	1,089	6.40%	
16	Evanston	74,582	75,658	1,076	1.44%	
17	New Lenox	24,430	25,426	996	4.08%	
18	Peoria	114,888	115,828	940	0.82%	
19	Shorewood	15,692	16,569	877	5.59%	
20	Arlington Heights	75,163	76,024	861	1.15%	
21	Vernon Hills	25,050	25,911	861	3.44%	
22	Volo	3,014	3,870	856	28.40%	
23	Montgomery	18,450	19,301	851	4.61%	
24	Downers Grove	48,917	49,715	798	1.63%	
25	Palatine	68,608	69,387	779	1.14%	
	*Source: U.S. Census Bureau					



Naperville added 3,828 residents, the second largest numerical increase of Illinois cities, followed by Champaign (3,314), Elgin (2,813), Oswego (2,565), Aurora (2,295) and Plainfield (2,188). If current trends continue, Joliet and Naperville, the fourth and fifth largest Illinois cities respectively, will surpass Rockford in population size within the next year or two.

NAPERVILLE: Analysis w/ Internal + Open Source Data (COOKING FIRES)





There are two main vulnerable groups here:

Young poor single mothers

Poor health and nutrition awareness leads to these mothers using a high preponderance of cooking oil and frying. Mothers will have little awareness of the dangers of cooking at high temperature with oils and virtually no understanding of what to do should a fire occur. Poor cooking safety habits are compounded by distraction with child care.

Reason for rise, poor job opportunities has seen the eligible male population migrate from the area to find work in the nearest large city 70 miles away. Reduction in home support to new mothers in recent years due to cuts in public program.

The second group are seniors over 70 years

The risk drivers here are incapacity due to falls whilst cooking or inattention due to declining mental acuity. The rise in this demographic group and the associated fragility has created an increasing risk. This at-risk group is less strongly correlated to low socio-economic status (although detailed analysis shows slightly higher frequency amongst the poor of this age demographic). Hence this group account for the background rise of such fires.





What's going on here:

The real giveaway in this risk is the age demographic- which shows the over 65's, who are an increasing proportion of Naperville's population, are the most vulnerable. This group accounts for almost the entire rise in injuries and deaths.





What's going on here:

Two factors are at play here the availability of the perpetrator between certain hours of the day and the rising availability of flammable materials.

The city has reduced its garbage collection and street cleaning services in recent years and resident are turning to more illegal dumping of larger goods, mattresses/ cars etc. This is providing a ready supply of materials for the juvenile fire setters. As well as the general antisocial behavior there is a motivation to see fire trucks and "action" in their neighborhoods.





What do we consider to be the key drivers of risk?



Component 4 Naperville CRA
Workbook







BREAK Lunch

SECTION 3/3

Putting it all together









Acuity Model

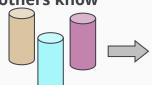




What we know



What others know



What this tells us



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Prevention



Where? How?

When?

Response

Plan and deploy



Where? How? When?

Protection



Where? How? When?

Lifestyle Data- What does this tell us?

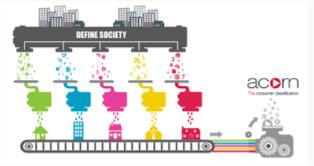


















LifeMode Group: Next Wave

Las Casas

Households: 888,000

Average Household Size: 4.09

Median Age: 27.8

Median Household Income: \$37,000

WHO ARE WE?

Cultural differences depict Las Casas, a family-oriented market distinguished by multi-generational households. Their spending reflects their children—baby food and fumiture or children's apparel—and convenience—fast food and family restaurants. Consumer choices also focus on personal style, as well as the latest trends and fashions. Although young and predominantly renters, this market is stable, affected more by immigration from abroad than local moves.

OUR NEIGHBORHOOD

- Older neighborhoods, which can be found in the urban periphery of large metropolitan areas, primarily on the West Coast.
- Most of the housing built before 1960;
 25% built before 1940.
- Housing a mix of single-family homes (less than half) and apartments, primarily in buildings with 2–4 units.
- Primarily renter-occupied homes, with an average rent of \$1,000 monthly.
- Family market, primarily married couples with children, but also a number of multigenerational households; average household size at 4.09.

SOCIOECONOMIC TRAITS

- More than 42% of the population was born abroad (Index 329); 30% of the households have members who speak only Spanish (Index 641).
- Unemployment is high at 12.5%;
 labor force participation is average (Index 99).
- They're trendy consumers who focus on style.
- Brand loyalty and environmentally safe products also guide purchasing choices, although these consumers are open to new products.
- They use but do not rely on technology.

Note: The Index represents the ratio of the segment rate to the US rate multiplied by 100.

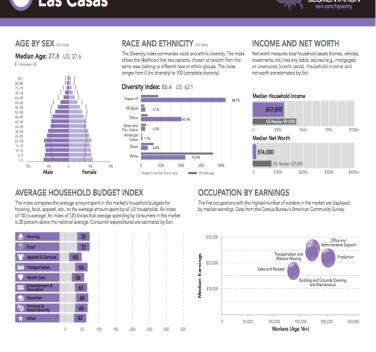
Consumer restreament are estimated from data by DN MM.





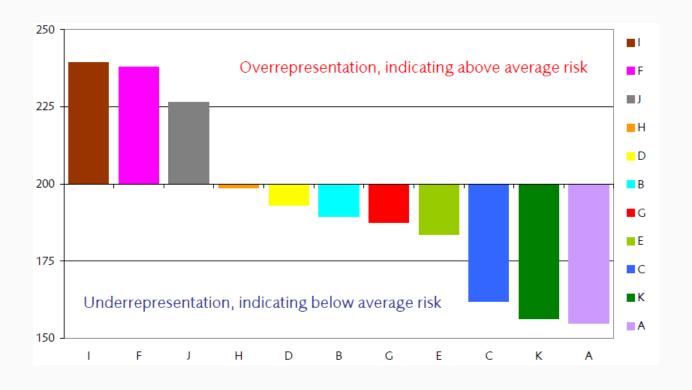








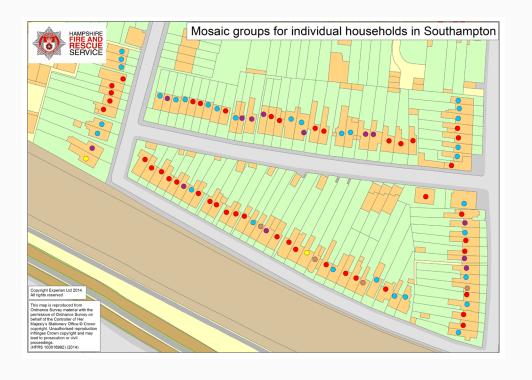




Lifestyle Data- Where's the risk?







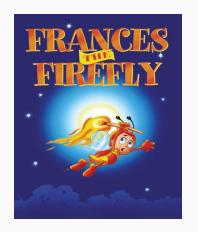
Who is the market segment and what is the message?





























Supermarkets used by kitchen fire cohort

	Mosaic Group						
Supermarket	Vintage Value	Municipal Challenge	Family Basics	Transient Renters	Modest Traditions	Overall	
Iceland	136	271	205	234	102		
INETTO	187	195	114	106	197		
ASDA	112	136	155	151	126		
ALDI	113	88	128	140	127		
MORRISONS	130	97	103	93	127		
SPAR	129	93	116	124	86		
L÷DL	141	104	78	95	113		
Other	93	122	114	96	94		
The co-operative good with food	134	83	72	82	84		
TESCO	86	89	91	88	91		
M&S	122	82	44	52	74		
Sainsbury's	79	76	55	61	75		
Waitrose	52	34	16	19	32		

















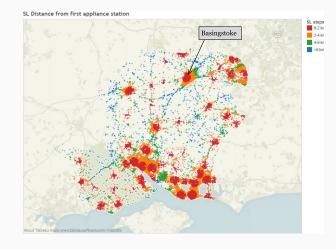


Response/ Command





















BREAK COFFEE

SECTION 3/4

Putting it all together-Tools and Techniques













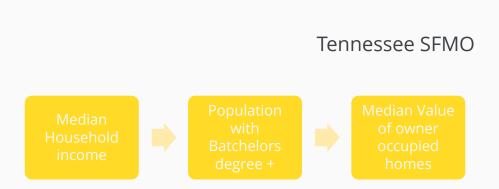
South Yorkshire Fire Service

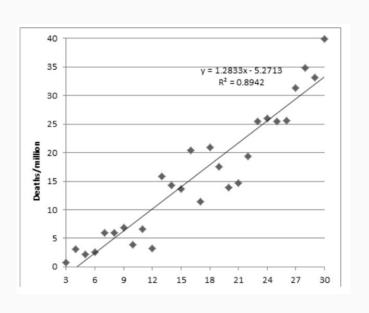


Risk Score	Risk Grading		
76 and above	Very High		
56 to 75	High Risk		
35 to 55	Medium Risk		
34 and below	Low Risk		









•Each of these are placed into deciles, giving them a value between 1 and 10. For example, census block groups in the lowest 10% of median household income are given a 10. The block groups in the highest 10% of income are given a 1. The scores for home value, income and education are then added up. Each block group has a resulting score between 3 (lowest possible risk) and 30 (highest possible risk).







Risk Models: Wildland Fire





		High	Moderate	Low	Structure Only
Parcel Base Hazard	Combined Fire Hazard (This is calculated based on the formula = 4*Surface Fire Risk+2*Crown Fire Risk+1*Fire Frequency Risk) THRESHOLD: HIGH >= 16, MOD 10<=X<=15, LOW				
Fire & Fire Frequency mapped					
to H/M/L]	2) Then map results to H=40, M=20, L=1	40	20	1	0
	[Internal Definition - select from pull-down]				
Red Flag Conditions	Normal	0	0	0	C
What are the exterior walls	I am I I am Timb and Consult Wood on Vind Cidina	4 0000007	4 0000007	4 0000007	4 000000
made of?	Log, Heavy Timbers, Smooth Wood, or Vinyl Siding	1.6666667	1.6666667	1.6666667	1.6666667
Roofing Material	Asphalt or Composition Shingles	-3.3333333	-3.3333333	-3.3333333	-3.3333333
Roof Cleanliness	No combustible material	-1.6666667	-1.6666667	-1.6666667	-1.6666667
Eaves	Boxed or Fire-Treated	▼1.6666667	-1.6666667	-1.6666667	-1.6666667
Location of woodpiles and					
combustibles	None or >30ft from Structure	-1.6666667	-1.6666667	-1.6666667	-1.6666667
If present, does propane tank					
have 10ft fuel-free buffer from					
vegetation/fuels?	Yes or Not present	0	0	0	
Vents	Baffled or Eighth-inch Mesh	-1.6666667	-1.6666667	-1.6666667	-1.666666
Balcony, Decks, or Porches	Combustible Material, Sheathed In	1.6666667	1.6666667	1.6666667	1.6666667
Tree Canopy Zone 1 (<30ft)	None	-1.6666667	-1.6666667	-1.6666667	-1.6666667
Surface vegetation Zone 1					
(<30ft)	Lawn, mowed wild grass or non-combustible material	-3.3333333	-3.3333333	-3.3333333	-3.3333333
Ladder fuels Zone 1 (<30ft)	Absent	-1.6666667	-1.6666667	-1.6666667	-1.6666667
Tree Canopy Zone 2 (30ft-					
100ft)	Separated	-0.8333333	-0.8333333	-0.8333333	-0.8333333
Surface vegetation Zone 2					
(30ft-100ft)	Lawn, mowed wild grass or non-combustible material	-1.6666667	-1.6666667	-1.6666667	-1.666666
Ladder fuels Zone 2 (30ft-	T.				
100ft)	Scattered	0	0	0	
Is surface fuel a continuous					

MODEL

WILDLAND FIRE PARCEL-BASED RISK ASSESSMENT

Risk Models: Wildland Fire







MAPPING

WILDLAND FIRE PARCEL-BASED RISK ASSESSMENT











CommunityRisk Reduction

Investing in your Community Risk Assessment

Using knowledge to reduce risk

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- We considered other sources of data "What do others know?"
- Why community risk is tricky
- We considered Naperville's community profile
- We examined the power of analysis, what it can tell us and where it can point us
- We examined the power of lifestyle data when considered with our activity data

SECTION 4/1

Taking Action-Determining Partners and Priorities









Oh we do partnerships!







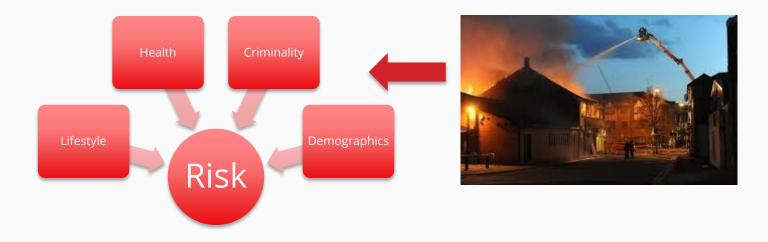














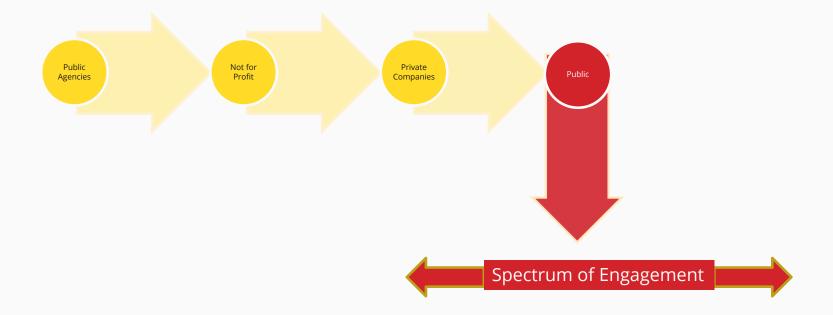


Reflect on your experience of working with partners.

- What works and why?
- What's difficult?
- What could <u>you</u> do to improve things?











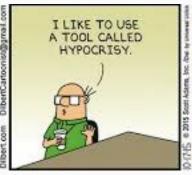


Transport













"Zombie Partnerships"

Pros and Cons of Partnership Working





- Additional Capacity
- Additional and complimentary skills
- Knowledge of problem/segment
- Credibility with stakeholders/segment
- Route to market/distribution network
- New perspectives
- Different solutions (samesame different)
- Avoid duplication/economies of scale
- Value chain approach
- More than the sum of the parts

- Different priorities in same problem space
- Diversion away from your key priorities
- Cultural differences/language
- Parochialism /professional territory
- Hard to cede control
- Perverse funding
- Mistrust
- Requires continuing energy
- Inflexible systems /data sharing
- Top to bottom support





- Joint Delivery
- Co-Funding
- Lead Agency
- Commissioning Model







	Public	Not for Profit	Private
Joint Delivery	Electric blanket testing	Dementia Program	Youth engagement - PTV
Co-Funding	Life Program	Unity 101	Water Safety
Lead Agency	Abandoned Vehicles scheme	Carers training	Samaritans- Train <u>Suicide</u>
Commissioning	Farm Safety/ Stability Programs	BLT	Sponsorship- McCain's

Lessons for Fire Departments-Effective Partnerships





Learning to work together



• Finding Common Objectives

New skills for us









Thinking of the shared agenda first

Cooking Fires

Low level arson in schools

 Fires amongst single males living alone

Fires amongst elderly infirm

Healthy Eating

Youth Engagement

Responsible Drinking

Independent Living/ Stability

Requisites for Successful Partnership Working





- Clarity and Shared Purpose
- Trust- top to bottom
- Resilient and committed leaders
- Scalable approach
- Investment and energy
- Governance and progressive ceding of control
- Safe systems of data sharing
- Focus on outcome "doing the right thing"
- Attention to hygiene factors



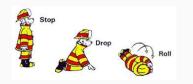
Spectrum of Community Engagement















Awareness	Passive	Active	Mobilization	Decisional
These are general messages aimed at elevating basic awareness of hazard &	Basic instructional messaging in relation a to a hazard often seeking avoidance	Seeking a change in behaviours which actively address a risk		







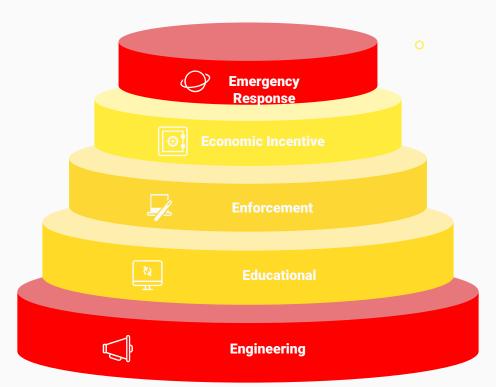
Tools for Action







These need to be seen as integrating actions rather than standalone



Mixture of behavioral and structural approaches to risk mitigation

Deciding on Action











Exercise 5

Exercise in setting priorities for Naperville



Component 5 Naperville CRA **Workbook**







BREAK Coffee

SECTION 4/2

Taking Action-Evaluating Effectiveness













"However beautiful the strategy, you should occasionally look at the results."

Winston Churchill











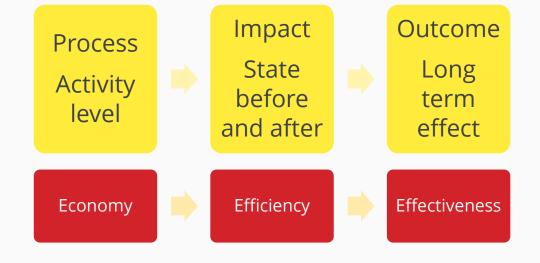
















What constitutes success?



• Finishing? Output

Participating? Input

Personal Best? Outcome

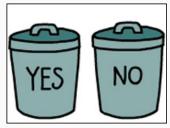
• Winning? Outcome













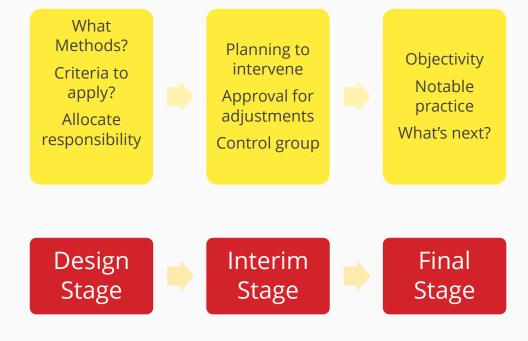
















- Make sure someone's responsible
- Mainstream the findings
- Create short, punchy, summaries
- Share Involve
- Celebrate!



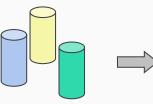


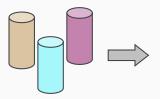


What we know



What this tells us







Incident data

Fire investigation reports Health indicators:

Fire safety infringements - Substance abuse

Lifestyle data

- Mental health issues
- Vulnerability Crime reporting ASB



- Lifestyle and incidents
- Health and fire risk





Plan and deploy

Protection







Where? How?

When?

Where? How?

When?

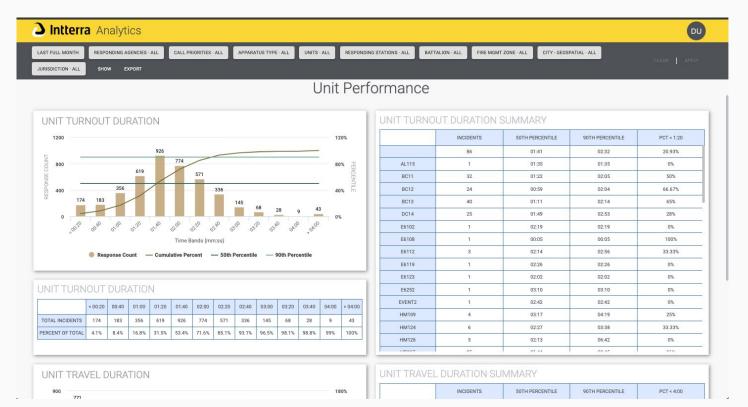
Where? How?

When?

Evaluation – Measuring Inputs







Inputs:

Get measured because it's an important starting place to understand ourselves...

Evaluation – Measuring Outputs







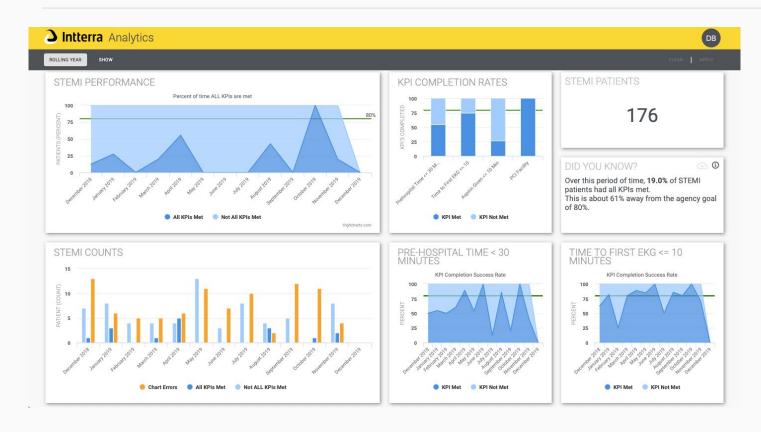
Output:

Get measured because they are performance metrics...

Evaluation – Measuring Outcomes (i.e. Measuring effectiveness)







Outcomes:

Gets measured because it's critical to compare our activity to what really happened with the patient...





Exercise

How do we evaluate Naperville Interventions based on Level 1 Crawl, level 2 Walk, Level 3 Run?



Component 6 Naperville CRA

Workbook









BREAK Lunch

SECTION 4/3

Leading Change









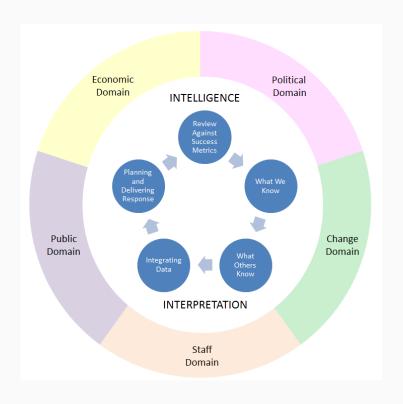
















- Determination, stamina, consistency you can never say it enough
- What gets rewarded, gets repeated structure reflects purpose
- Sometimes, people have to go let "ruthless compassion" be your watchwords
- Labor & The Public a difficult alliance
- Personal resilience take care of yourself too





















- Understanding the cost or impact of emergencies on local economy
- Working through some basic cost-benefit analysis (e.g. cost of life)
- Looking beyond the immediate costs-social capital
- Framing the argument in a different way for different audiences
- Developing stories that do the work for you











- Understanding the relationship
- Understanding the pressures and desires
- "Shroud-waving" vs Value added?
- Getting your hands dirty?











- The process of engagement
- "Do it to the public or with the public"
- The level of understanding-keeping it understandable
- Avoiding a "dialogue of the deaf" professionalism vs emotion
- **Organized labor and their influence**
- **Media relations**









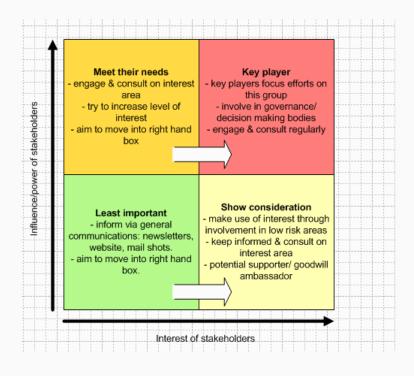


- Change experienced as loss
- The rational vs emotional argument
- The messengers
- The channels (inc organized labor)
- "So what's in it for me?"
- "One trick pony concept"
- Accept it's often a long process

• But, at the end of the day... you lead.













"Just as the alternative to being old is not being young but being dead, the alternative to embracing the future is not living comfortably in the past but failing in the future."

Jeremy Brown MP





Lack of leadership ... "the usual suspect"

Lack of awareness ... a burning platform?

Lack of thought ... poorly considered strategy

Lack of consistency ... mixed messages

Lack of planning ... change is deliberate

Lack of resources.....this is the day job

Lack of Belief...leads to withdrawal of commitment

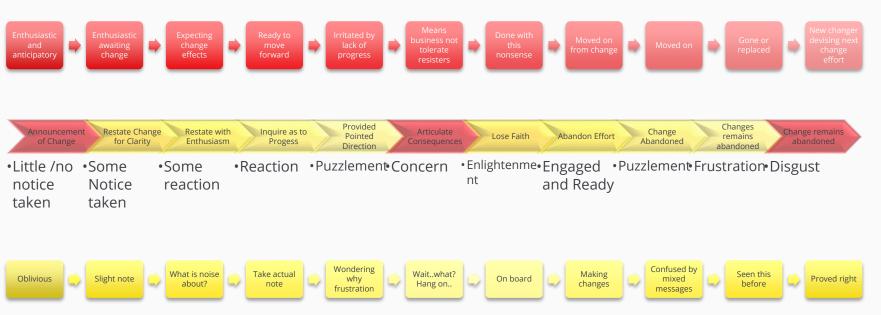


Change Reaction Delay Effect





Changer



Changee





A challenge from the Institute for Healthcare Improvement in 2004....

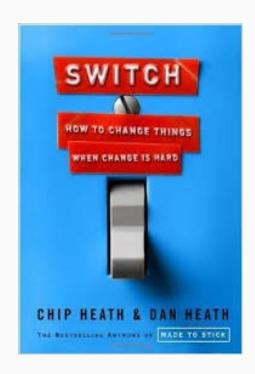
"I think we should save 100,000 lives. And I think we should do that by June 14 2006- 9am – 18 months from today. 'Some' is not a number; 'soon' is not a time."



Donald Berwick CEO IHI











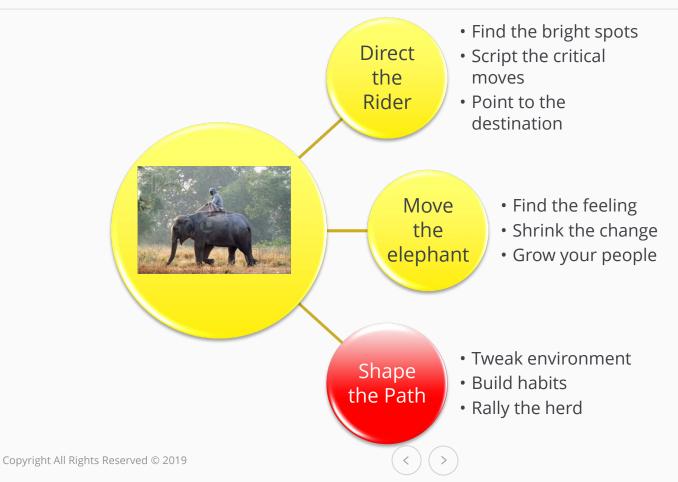
"The Elephant and the Rider"



The Elephant & The Rider



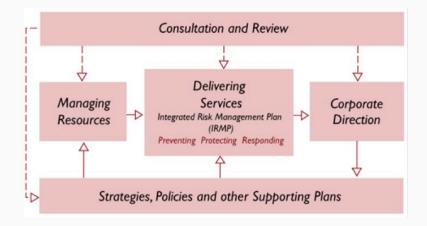


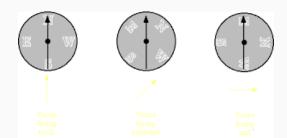


Aligning systems and behaviors











Using the culture to effect change



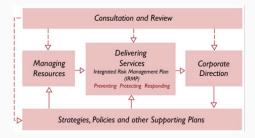




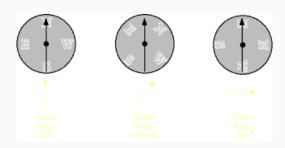
Aligning systems and behaviors













Build new Folklore



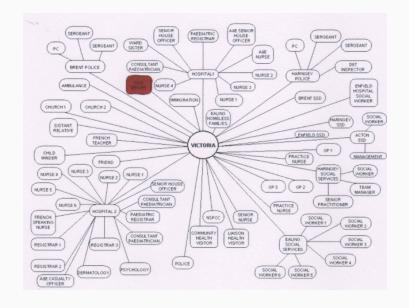




New Folklore-Using Cultural Anchors

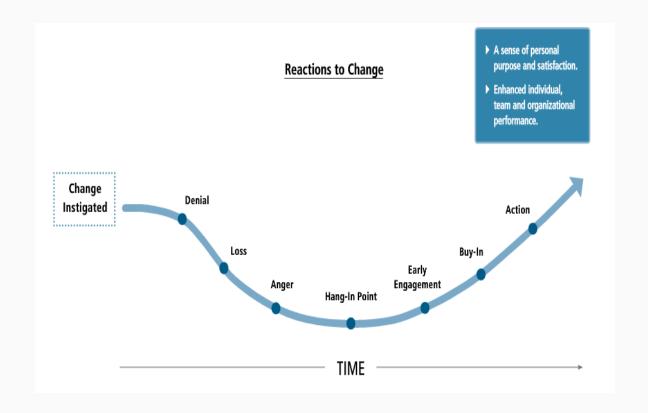
















What is the narrative of change for Naperville?



Component 7 of Naperville CRA









BREAK Lunch

SECTION 4/4

Putting together the CRA





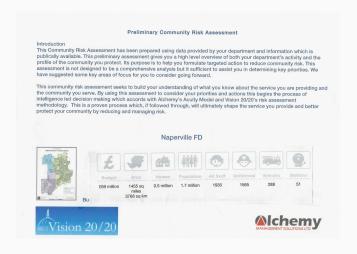




Preparation for Tomorrow













As a team you will be making a presentation

The Presentation should be a maximum 20 minutes

The presentation is entitled "Building our CRA for Naperville"

Sections - Our aim for our community

What we know

What others know

What this tells us

What we will do

How we will learn

And...... How we will tell it to your audience















Investing in your Community Risk Assessment

Using knowledge to reduce risk





- We considered what action we can take and with whom
- We looked at the value and downsides of partnerships
- We reviewed the different forms of partnerships
- We explored the idea of evaluation particularly in terms of inputs, outputs and outcomes
- We examined the tools available to us which can assist in evaluation
- We spent time considering the nature of the change and how this relates to the "Acuity model"
- We scoped out our task for today

SECTION 5

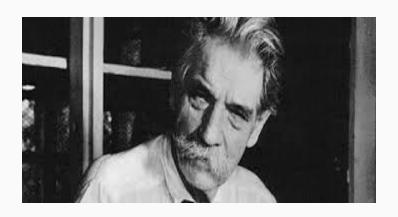
Group Exercise







"Example is not the main thing in influencing people; it is the only thing."



Albert Schweitzer





TOP TEN FEARS AMONGST AMERICANS

- 1. Speaking before a group
- 2. Heights
- 3. Insects and bugs
- 4. Financial problems
- 5. Deep water
- 6. Sickness
- 7. Death
- 8. Flying
- 9. Loneliness
- 10. Dogs





- Think of the audience
- Rational and Emotional
- KISS principle
- Power of stories







In 1982 there were 4.6 billion people in the world and not a single mobile phone subscriber.

Today there are 7 billion people in the world – and six billion mobile phone subscriptions.







- Think of it as a gift
- Constructive
- Solution-based
- Evidence-based
- Practical











WELL DONE!

- On-going support
- Network building
- Sharing Experience
- Evaluation









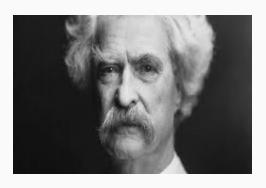








"Keep away from the people who try to belittle your ambitions. Small people always do that, but the really great make you feel that you, too, can become great."



Mark Twain







Thank You!

Connect-Share-Promote

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CommunityRisk Reduction

Investing in your Community Risk Assessment

Using knowledge to reduce risk

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