# An Interdisciplinary Approach to Evaluating Technologies

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Campus Safety
CONFERENCE 2019
Making Campuses Safer — TOGETHER

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- Cellphones on vibrate or silent
- Access to the presentation
- Q&A Session at end
- Evaluations
- Social Media

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# About Me

- 50 years of public service

- Ph.D.; former university professor

- Former chief of police

- Nationally recognized expert on NC2

- Certified firearms and active shooter response instructor

- Oversees outreach to 75K students on 6 campuses at nation's second largest and most diverse community college

# About this Session

**Session Takeaways**

- Technology (and other decisions) exist within a cultural/structural context

- Decisions must relate to and will vary with an agency's priorities

  – Diverse inputs in a collaborative environment are key

- Systematic and collaborative methodology for decision-making

  – How to relate means to ends

  – How to identify the health of agency missions

  – How to identify priority corrective actions

  – How to gain funding support in a resource-constrained environment

# Exercise

*List 3-5 problems with/obstacles to decision-making and implementation in your organization.*

# Is the Security/LE Environment Stable?

- If not:
  - Are our goals consistent with the emerging environment? How do we know?
  - If not, what mechanisms exist to modify them? Who leads the effort?
  - If we change our goals, what are the impacts on:
    - Priorities?
    - Resources and programs?
    - Authority patterns and organizational culture?
  - What is the role of leadership in:
    - Facilitating organization change?
    - Managing cultural dislocations?

# Selected Trends Affecting Security/LE Environment

- Aging population

- Immigration

- Fractionalization of society, with increasingly partisan politics

- Terrorism, including increasing frequency/lethality of active incidents

- Increasing government regulation

- Mental health "epidemic"

- Digitalization of society

- Challenges to hierarchy

# Aging society: Generational Differences Affect CFS

- Increased eldercare health issues (welfare checks)
- Older citizens feel entitled; expect respect/deference; adhere to values:
  - Sacrifice
  - Responsibility
  - Accountability
  - Organizational loyalty
  - Defer immediate gratification for long-term goals
- Lower tech (confused by police actions, which they consider impersonal)
- Financial drag on investment and families (heightens importance of issues)

# Aging (cont.)

- Millennials/Me Generation: opportunities and challenges for LE
  - Virtual/high tech (officers seem impersonal)
  - Episodic focus (twitter, short texts); less focus on long-term goals
  - Not constrained by information structural hierarchies (violation of chain of command)
  - Less internal and overall organizational loyalty (e.g., retention issues)
  - Fewer face-to-face communications skills
  - Individualism (i.e., everyone is special)
  - More current information than superiors, though former lacks experience

# Immigration

- New languages (both verbal and non-verbal) and perspectives

- Fear and distrust of police/uniformed personnel

- Youth; high unemployment and poverty
  - Attractive gang recruitment targets; violence

- Different attitudes of some toward traditional US values/culture hinders assimilation:
  - Role of women
  - LGBTQ

- Remain outside system; however, reliance on government support

# Fractionalization of Society

- "Ask not what your country can do for you."

- Fewer unifying experiences: military, warfare, Cold War, campus protests

- Reduced overt commitment to commitment/self-sacrifice

- Balkanization: age, gender, wealth, race, sexual orientation, abortion, ideology

  - Tribalism (focused on mutual hatred) displaces sense of community (mutual affection)

- Increasingly partisan politics, resulting in stagnation and cynicism:

  - "Wealth Creators" vs."Wealth Consumers"

  - Others: "deplorables", "low information voters" (left and right)

# Terrorism

- Domestic: Sovereign Citizens, AltRight, Antifa, Lone Wolves, Copy Cats
  - Responding to real/perceived grievances
- International: Al Qaida/ISIS identify schools as attractive targets
  - Magazines are instructional guides to terrorism
- Increasing sophistication of threats
- Increased government surveillance/intrusion
  - Due process?
  - Secrecy?

# Digitalization of Society ["Print is dead!"; (Egon Spengler, "Ghostbusters")]

- Instantaneous information from multiple and decentralized sources
  - People tend to reconfirm biases by program selection
- Providers are able to manipulate info delivered
- Cloud storage/control over one's information?
  - Paper vs. digital records: new issues (e.g., storage duration/capacity; data management systems; security)
- Issues:
  - Info overload and constantly changing
  - What do we know?
  - How can we be sure?
  - New crimes (beyond white collar; international)

## (depression, psychoses, manic, panic)

- These people are on your campuses
  - Nearly 20% of US adults live with mental illness (2016, Nat'l Inst. MH)
  - Fewer than half receive treatment
- National College Health Assessment results:
  - 21 million college students transitioning to adulthood undergo significant challenges to mental health and well-being.
    - New social structure; greater academic pressure; less familial support; campus activity obligations; struggle to balance academic, social, nutrition, exercise, etc. (IACLEA, Jan/Feb 2019)
  - *60% of student surveyed experienced overwhelming stress/anxiety.*
  - *40% were too depressed to function. (Behavioral impacts?)*
    - Only 10-15% of these students seek mental health assistance.

**(2010-2015 Changes)**

- Been hospitalized for MH concerns: + 46%
- Seriously considered suicide attempt: + 38% (within last month: + 15%)
- Made a suicide attempt: + 20%
- Attended counseling for MH concerns: + 7%
- Taken medication for MH concerns: + 7%
- Anxiety Disorder: 3.2-fold increase in the probability of substance abuse disorder
  - Since 2008, ER visits/in-patient stays increased 260%/325%, respectively
  - 3-fold rise in cost of treatment, to ~$3 billion
  - Earn 11% less than those without anxiety disorders
- How much training do employees receive?
- Technological opportunities?

*(source: Campus Law Enforcement Journal, IACLEA, Jan/Feb 2019, pp. 28-30) and National Center for Campus Safety, Weekly Snapshot May 29, 2019*

# Decision Structures (Ideal Types)

### Hierarchy/Pyramid

- Focus: production

- Requirements/characteristics:

  – Stable/predictable

  – Specialization ("stay in lane")

  – Rational cost/benefit dmkg

  – Specified AORs/stay in lane

  – Unambiguous chain of command

  – Specified comms paths

  – Accountability for failure

  – Over-values authority

### Flat/Decentralized

- Focus: innovation/adaptation

- Requirements/characteristics:

  – Dynamic

  – Sharing information

  – C/B not possible; risk-taking

  – Interdependence/collaboration

  – Expertise trumps authority/knowing the ropes

  – Multiple/overlapping comms paths

  – Shared responsibility/interdependence

# In other words….

### Implications: change/complexity

- New forms of motivation
- New forms of crime
- New societal values/expectations
- Acceleration of technology
- New channels of communications
- Now loci of influence (i.e., authority dislocations)
- Interdependent systems

### Impact of Complexity: new org culture

- Cross agency communications
  - Consistent with "flat" social media
- Change from pyramid to hybrid
- New decision calculus
- Role of leader
  - Get the right people at the table early in the process
  - Expand dmkg beyond depts
  - Teamwork, not dept advocacy

# Can Hierarchy Generate Innovation?

- Authority vs. Expertise Gap

- Different values within structure (<u>Essence of Decision</u>)

  – Kennedy values vs. Service values

  – Departmental vs. Overall loyalty

- Difficulty in making "rational" decisions

  – Bias toward incremental decision-making

  – Change threatens mission, influence, procedures

- Resistance to movement away from:

  – Hierarchy/authority structures

  – Production

# How to Generate Innovation?

- Focused teams collaborating under leadership

- Decentralize

- Skunk Works

- Rotate people out of long-term positions

- New hires

- Anonymous suggestion box

- Heterarchy (authority and expertise centers are not in the same place)
    - Work accomplished by centers of expertise (e.g., underlings draft summit agreements, which leaders bless)

- *Others?*

# Questions

*Are you still using the same technologies?*

*What is your decision structure?*

*Is it proactive or reactive?*

*Who participates?*

# Methodology

# Sound familiar?

- 3 options presented to a decision-maker

  – New video camera system (police/security)

  – Electronic key system (facilities)

  – Panic dialers in all classrooms (IT)

- Limited resources (money, implementation time)

- Factors affecting decision

  – Perceived need (varies with departments)

  – Personalities

  – Alliances

  – Relative power of respective advocates and divergent perceptions of needs)

  – Experience of leaders

  – Bureaucratic culture

# Focus

- How do we decide to decide?
  - What are the rules/criteria?
  - Who decides?
- Every decision must be evaluated with respect to:
  - The institution's cultural/structural context
  - The institution's overall goals
    - Not necessarily the department's goals
  - How the decision helps achieve the goals

# Methodology

- Identify/prioritize ends (i.e., goals, outputs)
- Identify relationships between goals
- Identify means/inputs (available; needed)
- Determine which means affect which ends
- Determine health/capability of means
- Evaluate ability to achieve each goal
- Identify means with the greatest impacts across the agency's goals
- Develop corrective actions/strategic plan

# Selected Goals (not in order of priority) (17)

- Support academic pursuits
- Create sense of community
- Enhance staff professionalism
- Create/maintain safe campus
- Enhance reputation for safety
- Support recruitment
- Support efficient business ops
- Avoid liability
- Enhance ability to innovate

- Student success/throughput
- Crisis response, mitigation, recovery
- Enhance campus members' perception of safety
- Enhance situational awareness
- Deter/address concerning behaviors
- Connectivity to local responders
- Integration with other institutions
- Long-term cost savings

# Interactions of Goals

## *Handout*

# Identify means (input categories)

- Personnel
- Procedures
- Facilities
- Equipment
- Communications

# Personnel (12)

- # of people

- Training content

- Concentration

- Experience (seniority/authority vs. expertise)

- Training frequency

- Assignment (e.g., is someone monitoring technological trends, the competition, etc.?)

- Location (proximity)

- Hierarchy/organization

- Specialization (security, emergency management, facilities, IT, academic, admin)

- Training staff

- Turnover

- Recruitment competition

# Exercise: Attendees Identify Procedures, Facilities, Equipment and Communications

- 2-person teams
  - What do you have?
  - What do you need but don't have?
  - Etc.

# Procedures (12)

- Drills

- Exercises

- Identify issues

- Analyze issues and technology (e.g., mean time between failures)

- Innovation

- Assess personnel

- Determine standards

- Lessons learned/best practices consolidation and implementation

- Follow-up

- Disaster response

- Real-time monitoring of cameras

- Patrol

# Facilities (9)

- EOC
- Dispatch
- Hardened/secure evacuation locations and shelters
- Distributed locations for security officials
- First aid stations
- Climate-controlled storage sites
- Hardened, safe and secure protective spaces for HAZMAT, weather, etc.
- Secure special equipment (servers, records, financial offices)
- Laboratories

# Equipment (including programs) (17)

- Social media monitoring
- Opaque film to cover doors
- Tourniquets'
- AED
- First aid kits
- Electronic locking systems
- Physical locking systems
- Gun shot recognition
- Generators

- TECC Kits
- Bollards/jersey barriers
- Speed bumps
- Cover in evacuation areas
- Security cameras
- Crime analysis software
- Electronic signage (flat screens)
- Data storage and retrieval systems

# Communications (12)

- Alert systems (cell, computer pop-ups, etc.)

- Social media

- Mobile safety app

- HT radios (interoperable) for parking, facilities, wardens, administrators, etc.

- Police radios

- Alarm systems (internal)

- Panic dialers

- Loud speakers

- Audio alerting systems (external)

- Radio station

- TV station

- Website

# Matrix

- 17 ends/goals

- 61 means/inputs

- Matrix = 1037 cells

|  | Environment | Reputation | Response | Liability | Awareness | Perception | # of Goals Affected |
|---|---|---|---|---|---|---|---|
| **Means** | | | | | | | |
| EOC | 1 | 1 | 1 | 1 |  | 1 | 5 |
| Dispatch Center | 4 | 4 | 4 | 4 | 4 | 4 | 6 |
| Hard Evac Ctrs | 3 | 3 | 3 | 3 | 3 | 3 | 6 |
| Hard Security Office | 0 |  | 0 |  |  |  | 2 |
| First Aid Stations | 3 |  | 3 | 3 | 3 | 3 | 5 |
| _____ | | | | | | | |
| # of impacts | 5 | 3 | 5 | 4 | 3 | 4 | |
| Max Poss. Score | 25 | 15 | 25 | 20 | 15 | 20 | |
| Score (column sum) | 11 | 8 | 11 | 11 | 10 | 11 | |
| Proportion | .44 | .53 | .44 | .55 | .67 | .55 | |

Ends

# Overall Status of Goals

- Environment: (sum of column/max possible score) .64

- Reputation: .62

- Liability: .61

- Response: .56

- Awareness: .64

- Perception: .59

- Behaviors : .45

# **Priorities (based on handouts)**

- Remote security stations/kiosks (affects all 7 goals)

- Mobile safety app (affects 7 goals)

- TECC kits for classrooms (affects 5)

- EOC (affects 3)

- Gun shot recognition (affects 3)

# How to prioritize corrective actions

- Probability of success

- Feasible

- Timeliness

- Dependent on other corrective actions being achieved first?

- Affects higher vs. lower priorities?

- Value (is the cost worth it?)

- Others?

- Are loudspeakers (yellow 3; affects 6 goals) more critical than a red that affects 3 goals?)

# *Exercise*

*Lessons learned?*

# Concluding thoughts

- Who decides whether goals are relevant and what are the criteria?

    – How is this process initiated and by whom?

    – Is the decision made before the crisis of imminent failure?

    – How do goals change over time?

- Organizational decisions do not exist in a vacuum; *shaped largely by culture*

- Innovation must be a continuous process in a dynamic environment

- Innovation does not occur naturally in hierarchical organizations

    – Supportive structures must be instituted with required assets/authorities

- Decisions must be tied to the organization's (not dept's) prioritized goals

- Leader must get the right people to the table early enough and encourage risk-taking and decentralized/interdependent approaches

# Reminders

- Access to the presentation
- Evaluations
- Social Media

# Contact Info

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*Back-up Slides*

# Manifestations

## (e.g., developmental issues, PTSD, TBI)

# *Everyone is under the influence!*

- Sensory overload
- Challenged by abstract thoughts
- Most crave routine
- Frustration due to shame, confusion or hopelessness
- Preoccupation w/certain ideas
- Problems with reason and problem-solving

- Volume
- Memory problems
- Lack of empathy and shared perspectives
- Embarrassment
- Defensiveness (personal space)
- Pacifying behaviors (may appear disrespectful)
  - Rocking
  - Stringing
  - Pacing /inability to sit still

# Dilemmas

- Limited budgets

- Competing orientations, values and goals

- Different means/ends calculus

- Difficulty in evaluating innovation

- Myopia due to specialization and having to stay in one's lane

- Complexity of technology

- Inter-dependent systems

- Changing priorities in a dynamic environment

- Authority vs. expertise gap