DATA-
DRIVEN

going from all

GUT

analytically inspired

TO
GLORY

by kimberly NEVALA
& analise POLSKY

DATA-DRIVEN. The term is prevalent, and conversations regarding the value and challenges in developing "analytic cultures" abound. Rather than retreading well-covered ground, we thought we'd take a different path.

In this e-book, we forego additional frameworks and models in lieu of some examples that endeavor, in simple terms, to:

Define what culture means.

Identify core key principles and practices of data-driven cultures.

Illustrate some practical impacts and implications of applying an analytic eye to your organization.

Provide a simple framework for managing the change.

OK, one framework (we couldn't help ourselves) along with some guideposts to help you on your way.

—Kimberly & Analise

CULTURE IS:

a. A particular way of life.
b. A process of enrichment.
c. An activity.
d. All of the above.

Answer Key

D. ALL OF THE ABOVE.
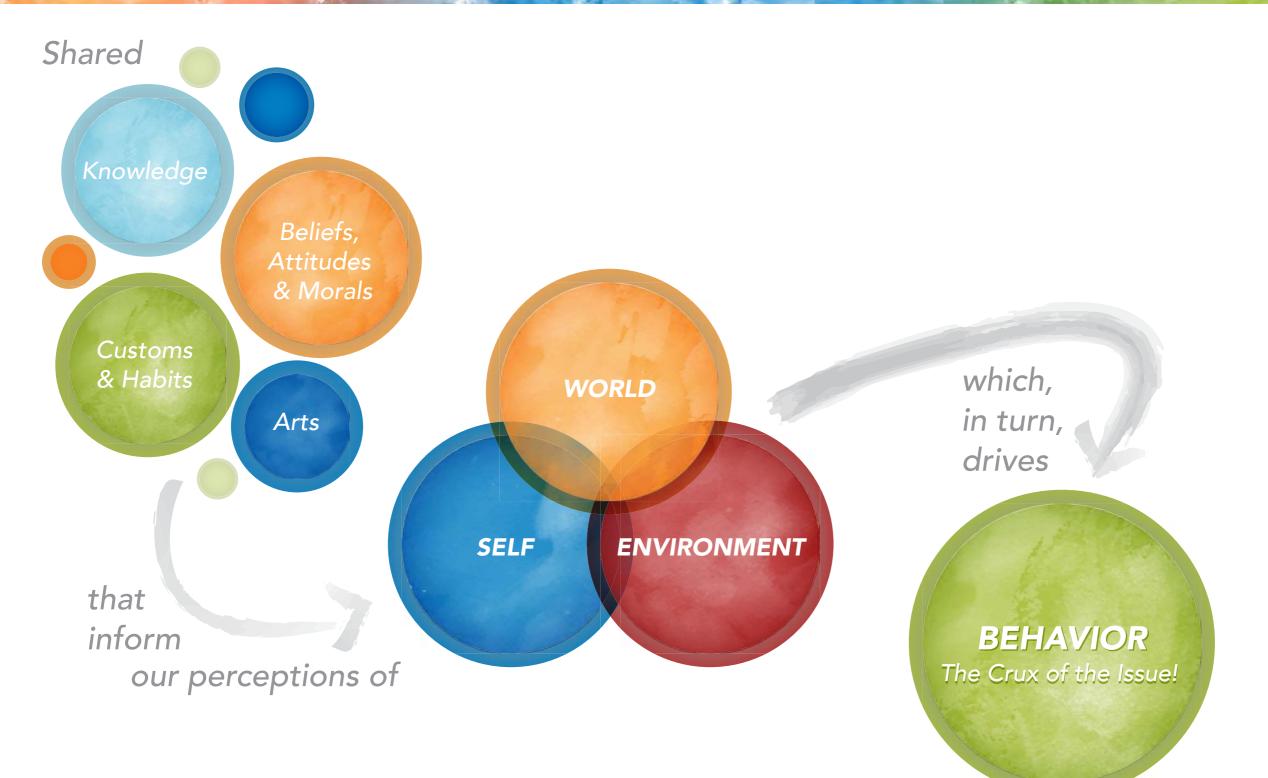
Shared

Knowledge

Beliefs, Attitudes & Morals

Customs & Habits

Arts

that inform our perceptions of

WORLD

SELF

ENVIRONMENT

which, in turn, drives

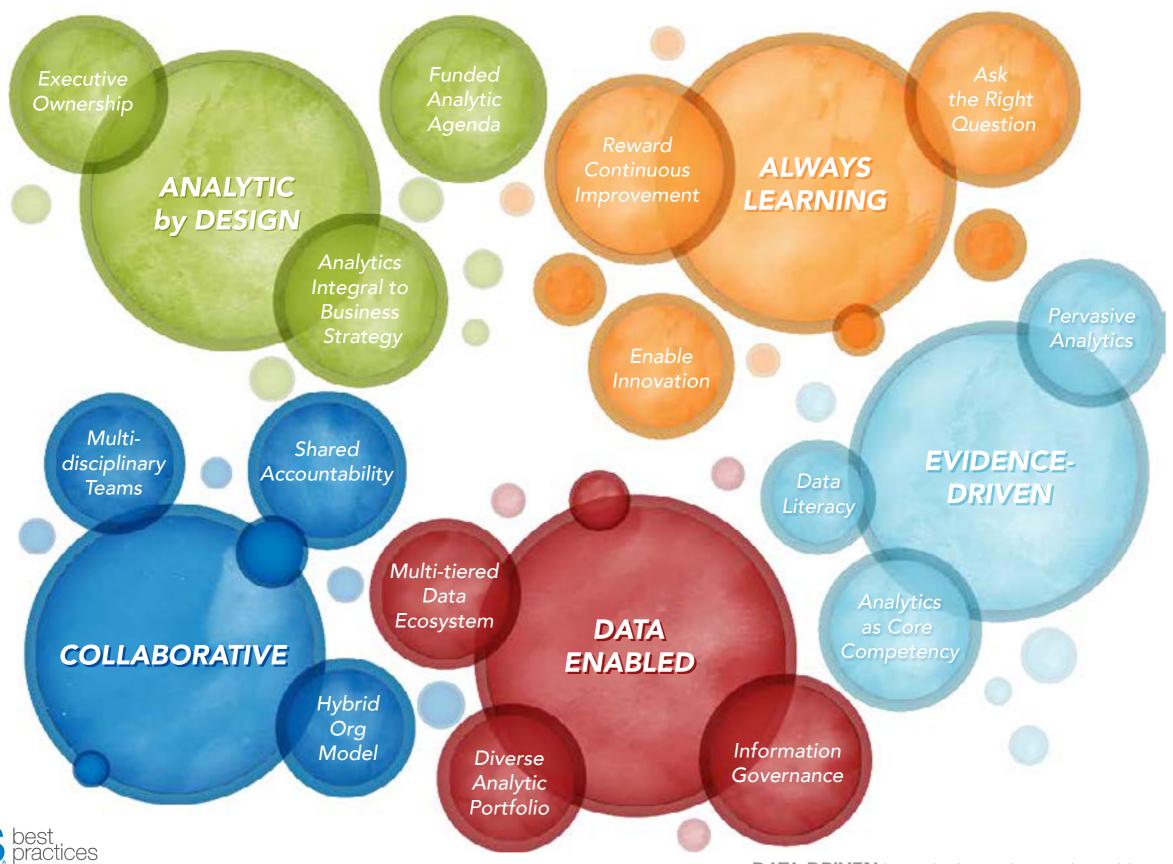**BEHAVIOR**
The Crux of the Issue!

DATA-DRIVEN *or* ANALYTIC CULTURE

IS: An environment cultivating the shared values, knowledge and practices required to apply evidence-based decision making to inform strategy, optimize operations and create opportunities for growth.

ANALYTIC by DESIGN
- Executive Ownership
- Funded Analytic Agenda
- Analytics Integral to Business Strategy

ALWAYS LEARNING
- Reward Continuous Improvement
- Ask the Right Question
- Enable Innovation

EVIDENCE-DRIVEN
- Pervasive Analytics
- Data Literacy
- Analytics as Core Competency

COLLABORATIVE
- Multi-disciplinary Teams
- Shared Accountability
- Hybrid Org Model

DATA ENABLED
- Multi-tiered Data Ecosystem
- Diverse Analytic Portfolio
- Information Governance

CORE PRINCIPLES & PRACTICES — A GLOSSARY

ANALYTIC BY DESIGN Data-driven organizations take a programmatic approach to analytics: complete with executive accountability and development of formal, funded analytic agendas aligned with core business strategies. Yes, they invest in acquiring new skills and tools. But data-driven companies also invest in incenting and rewarding desired analytic behaviors.

ALWAYS LEARNING A data-driven organization is characterized by a willingness to consider new perspectives. To acknowledge that what was known and has worked in the past might not apply in the present or future. To that end, asking the right questions is valued over pat answers. Assuming, of course, that the means [questioning] don't overtake the ends [better decisions, improved business outcomes]. "Test and learn" practices that support continuous improvement and learning are integral to both operational improvement and strategic decision making. A-B testing isn't just for marketing campaigns anymore!

COLLABORATIVE Data-driven organizations take a "co-creative" approach to problem solving. Bringing together multi-disciplinary teams incents creative thinking and fosters alignment and partnership. This approach also maximizes the reach of specialized skill sets and ensures that the business savvy, data discipline and analytic expertise required to deliver value - and not just insight for the sake of insight - is present on all projects.

DATA ENABLED Rather than a one-size approach to information delivery, data-driven organizations recognize that there is a spectrum of usage profiles and information consumption patterns: from the green field needs of true data scientists to very discrete, directed needs of front-line staff. This results in a multi-faceted data ecosystem and robust analytic portfolio that is nimble but governed. Aligning information access and usage policies with not only the content but context of use.

EVIDENCE-DRIVEN The data-driven organization mindfully embeds and delivers analytic intelligence at all levels of the organization: from informing strategy to optimizing operations. Data literacy is considered as integral as domain expertise. Most importantly, executives and managers model desired behaviors. Utilizing analytically derived insight to inform and/or confirm decisions big and small without prejudice.

It is true that an analytic orientation alone does not create change. However, an analytic perspective can both support and spur a company's ability to innovate and compete effectively.

Structural considerations related to people, process and technology aside, data-driven companies tend to:

1. **ASK DIFFERENT QUESTIONS** [or minimally, approach the same questions from a new angle]. Using analytic insight to spur discussion, data-driven companies think differently: ruthlessly interrogating how the business operates and even what the business of the business is. Thereby moving from "how are we doing?" to "what are we doing?" and, more importantly, "why?" In doing so, data-driven companies often gain a new perspective on their problem space. This in turn leads them to …

2. **REINVENT "BUSINESS AS USUAL"** by rethinking why, how and what they do (or sell). Typically, big transformations start with small steps. First: optimize existing practices. Next: proceed to more fundamental "rethinks." During this evolution, data is first applied to drive insight and decision making. Data-fueled insights or decision points then become an integral part of the business process or product itself.

In broad strokes, these changes are often accompanied by or precipitate:

✔ **REDEFINING** or refocusing the lens that defines who the customer/constituent/consumer is, what they want, and how best to serve them.

✔ **REVAMPING** existing business processes and practices. Specifically, breaking down boundaries between functional process silos to create shared accountability, increase operational efficiencies and streamline service delivery.

✔ **REINVIGORATING** the company through the creation of new products, services and engagement models. In many cases, these products are themselves data-driven. As in the case of IoT enabled devices that allow manufacturing companies to detect impending failures on a manufacturing line or machine and take preventive action before a breakdown occurs.

A case in point (taken from the public sector) follows. While the particulars may vary the lessons learned apply broadly to organizations across industries and markets.

DATA-DRIVEN

Being data-driven starts by asking the right questions to understand how your business operates and what the business of your business really is.

FOR EXAMPLE:

- *Does juvenile justice start when a child lands in detention?*

- *Are we enabling juvenile self-sufficiency or creating system dependency?*

- *When are our services effective? When not? Why?*

- *How is success measured?*

Of course, asking the question is easy.

The tough part? Being ready for the answers that might result. Particularly those that fly in the face of conventional wisdom or standard operating procedures.
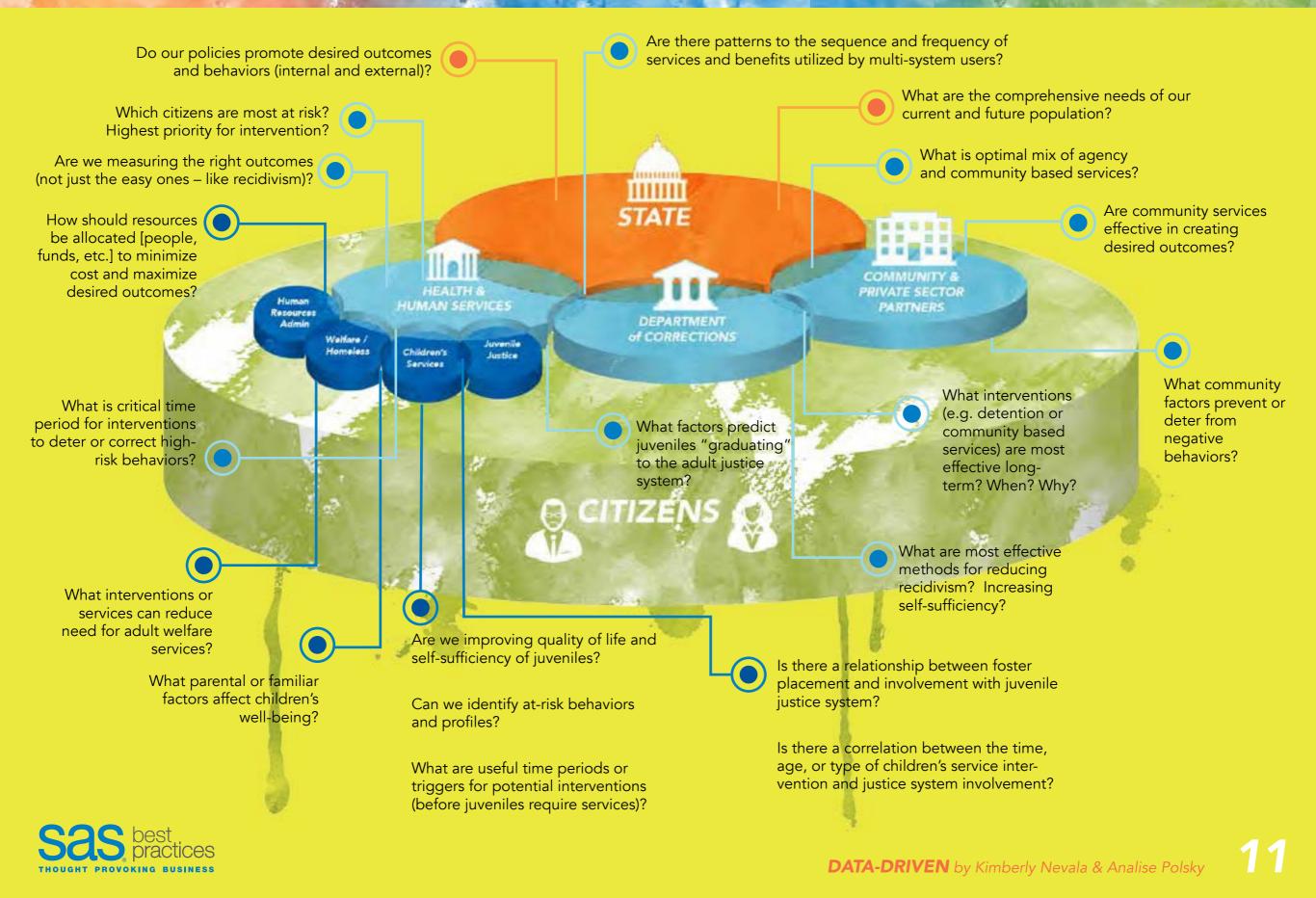

A KEY POINT!

The most interesting and valuable insights often occur in the intersections between processes and functions.

For example...

Do our policies promote desired outcomes and behaviors (internal and external)?

Are there patterns to the sequence and frequency of services and benefits utilized by multi-system users?

What are the comprehensive needs of our current and future population?

Which citizens are most at risk? Highest priority for intervention?

Are we measuring the right outcomes (not just the easy ones – like recidivism)?

What is optimal mix of agency and community based services?

How should resources be allocated [people, funds, etc.] to minimize cost and maximize desired outcomes?

Are community services effective in creating desired outcomes?

STATE

HEALTH & HUMAN SERVICES

COMMUNITY & PRIVATE SECTOR PARTNERS

Human Resources Admin

Welfare / Homeless

Children's Services

Juvenile Justice

DEPARTMENT of CORRECTIONS

What is critical time period for interventions to deter or correct high-risk behaviors?

What factors predict juveniles "graduating" to the adult justice system?

What interventions (e.g. detention or community based services) are most effective long-term? When? Why?

What community factors prevent or deter from negative behaviors?

CITIZENS

What interventions or services can reduce need for adult welfare services?

What are most effective methods for reducing recidivism? Increasing self-sufficiency?

What parental or familiar factors affect children's well-being?

Are we improving quality of life and self-sufficiency of juveniles?

Is there a relationship between foster placement and involvement with juvenile justice system?

Can we identify at-risk behaviors and profiles?

What are useful time periods or triggers for potential interventions (before juveniles require services)?

Is there a correlation between the time, age, or type of children's service intervention and justice system involvement?

Becoming truly data-driven requires organizations to break down historical functional silos to gain a truly comprehensive and unbiased understanding of:

Who is our customer... *really?*

Does our view of the customer or constituent reconcile with their view of us?
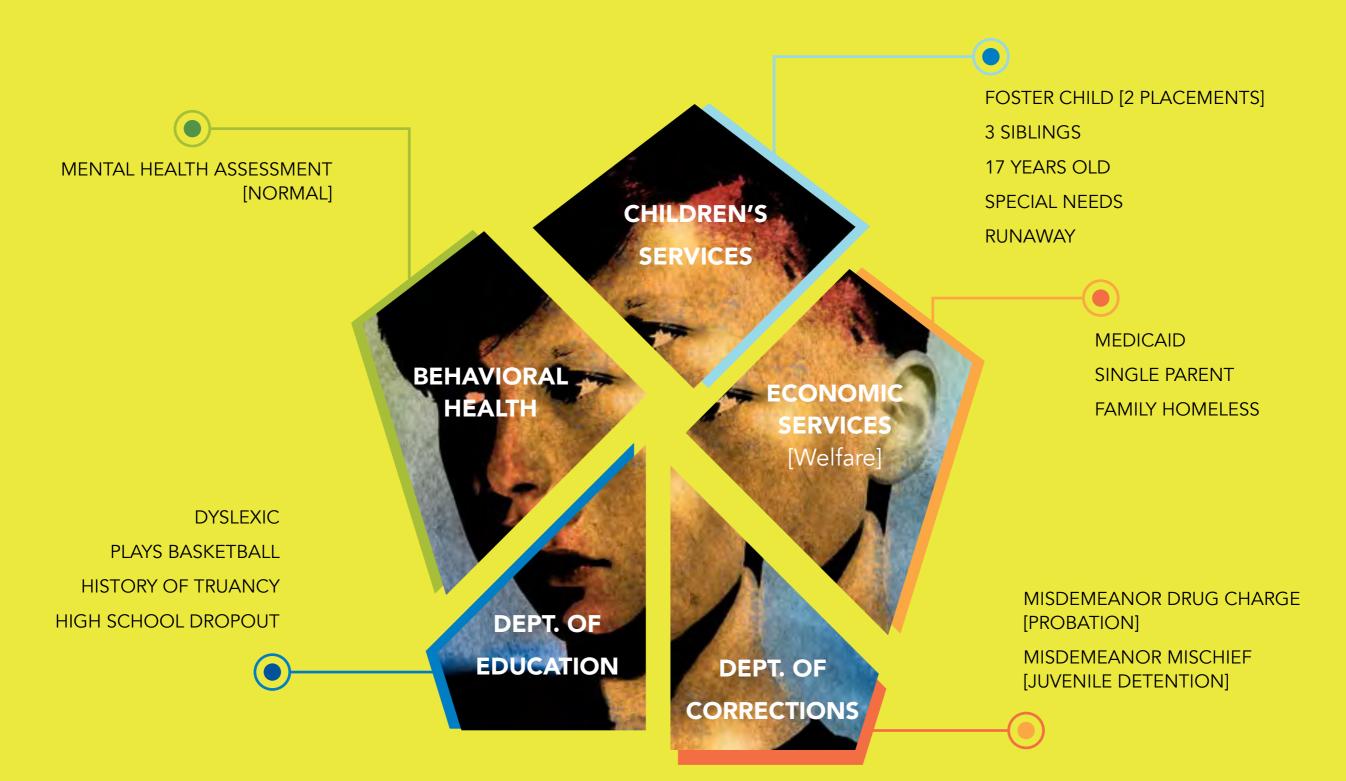
How do our products, services and engagement model support our customer or constituent holistically?

When done right, this type of analytic introspection naturally leads to new clarity about who your organization serves. As well as a deeper understanding of the customer or constituent's goals and aims. This is turn spawns new considerations for how to deliver existing services and products more effectively. More importantly, this type of analysis spurs new, creative thinking about what new services or products might be most effective or desired.
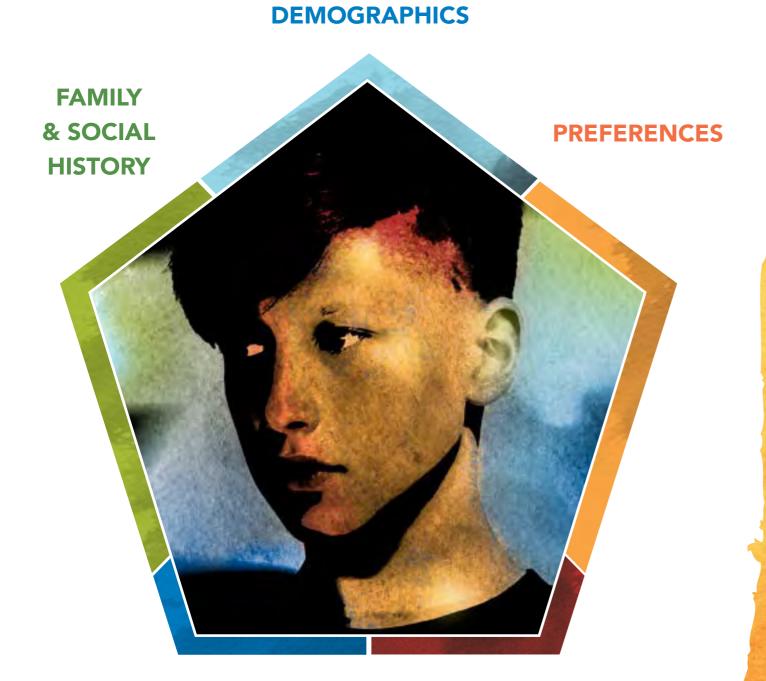
FOSTER CHILD [2 PLACEMENTS]

3 SIBLINGS

17 YEARS OLD

SPECIAL NEEDS

RUNAWAY

MENTAL HEALTH ASSESSMENT
[NORMAL]

CHILDREN'S
SERVICES

BEHAVIORAL
HEALTH

ECONOMIC
SERVICES
[Welfare]

MEDICAID

SINGLE PARENT

FAMILY HOMELESS

DYSLEXIC

PLAYS BASKETBALL

HISTORY OF TRUANCY

HIGH SCHOOL DROPOUT

DEPT. OF
EDUCATION

DEPT. OF
CORRECTIONS

MISDEMEANOR DRUG CHARGE
[PROBATION]

MISDEMEANOR MISCHIEF
[JUVENILE DETENTION]

THE VIEW AFTER

DEMOGRAPHICS

FAMILY & SOCIAL HISTORY

PREFERENCES

BEHAVIOR

SERVICE PROFILE

As previously noted, applying insights that contravene historical practices first requires a willingness to ask potentially uncomfortable questions.

Next, organizations must think differently in order to act on the results.

To that end, exploiting found insights invariably requires breaking down silos between traditional business processes and functions to create shared accountabilities and deliver a seamless customer experience.

Every interaction has its own processes & metrics...

BEHAVIOR

INTENT

...parties are also collectively accountable for systemwide *"macro-measures."*

PREFERENCES

SHARED SYSTEM OUTCOMES & ENGAGEMENT MODELS

EDUCATIONAL SERVICES (DOE)	WELFARE & HOMELESS SERVICES	CHILDREN'S SERVICES	JUVENILE JUSTICE	COMMUNITY PARTNERS	DEPT. OF CORRECTIONS (DOC)

OPERATIONAL STRATEGY ALIGNMENT

PROMOTE and enable desired behaviors and skills.

MINIMIZE or eliminate key risks and triggers for long-term system dependency.

UTILIZE best evidence and knowledge to optimize program and service delivery.

TAKE ACTION to promote citizen engagement and self-sufficiency.

CONTINUOUS MEASUREMENT

As shown on the previous page, **DATA-DRIVEN ORGANIZATIONS** enforce cross-functional goals through common objectives and shared accountability for system outcomes. This is different from historical approaches in which results were viewed through an agency or department-specific lens.

Making the turn requires a change in perspective. From viewing services provided by disparate agencies or departments (aka LOB or functions) as discrete entities to viewing them as a continuum of interrelated services. None of which operates in a vacuum and can be considered in isolation.

THE LAST MILE? Ruthlessly measuring and reassessing the business on an ongoing basis to ensure it continues to keep pace with rapidly changing external – and internal – drivers.

DATA-DRIVEN

EDUCATE

ENGAGE

ENABLE/ EMPOWER

A 3-STEP APPROACH TO CHANGE

FIRST, establish and communicate the vision and objectives.

THEN, engage with the people in the know to identify and create desired behaviors.

NEXT? Enable and empower your employees, customers and partners to drive change and deliver results.
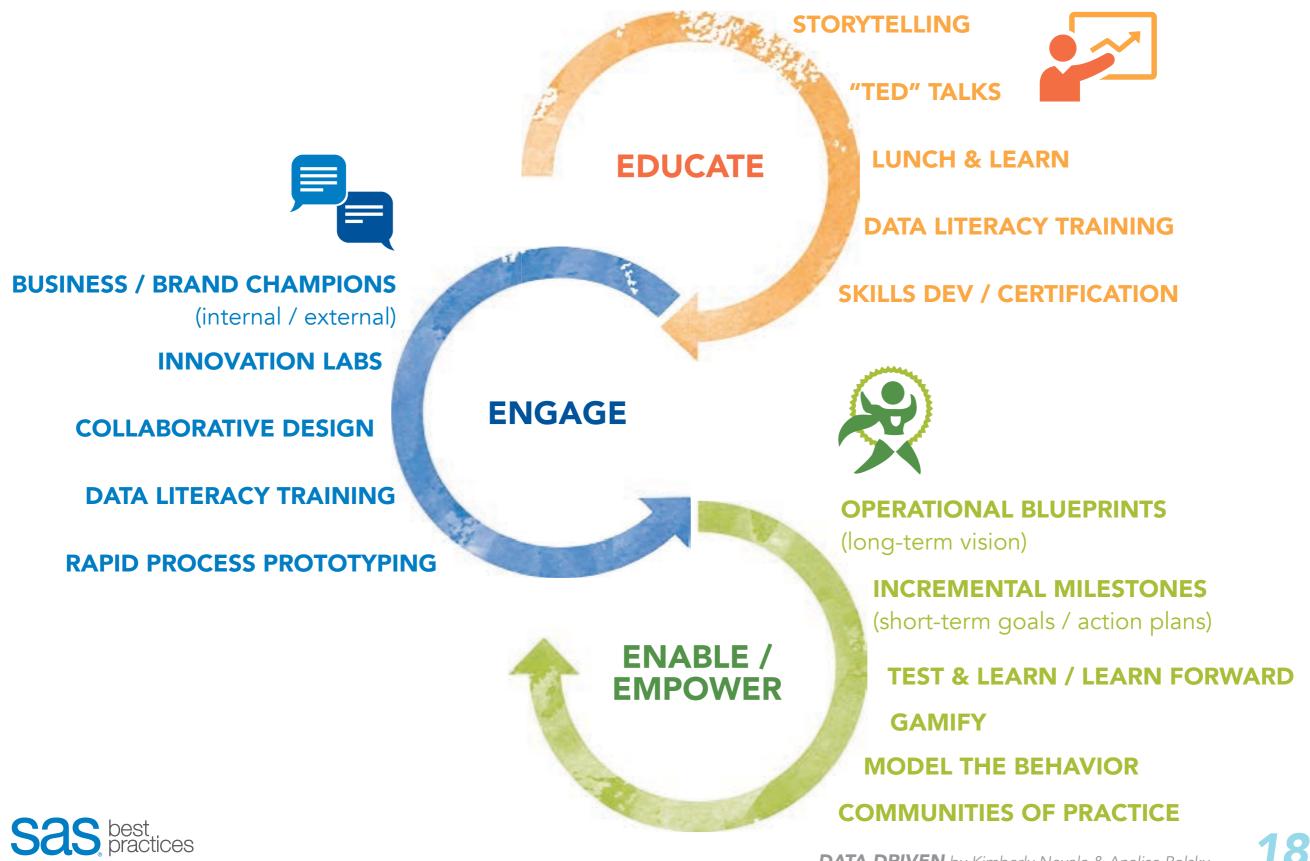
WHOOPS! Not done yet….

These phases are not mutually exclusive. Or once-and-done. Change management is an iterative and interactive cycle.

EDUCATE

STORYTELLING

"TED" TALKS

LUNCH & LEARN

DATA LITERACY TRAINING

SKILLS DEV / CERTIFICATION

ENGAGE

BUSINESS / BRAND CHAMPIONS
(internal / external)

INNOVATION LABS

COLLABORATIVE DESIGN

DATA LITERACY TRAINING

RAPID PROCESS PROTOTYPING

ENABLE / EMPOWER

OPERATIONAL BLUEPRINTS
(long-term vision)

INCREMENTAL MILESTONES
(short-term goals / action plans)

TEST & LEARN / LEARN FORWARD

GAMIFY

MODEL THE BEHAVIOR

COMMUNITIES OF PRACTICE

ZEE

After the local police pick Zee up for truancy charges, he meets with his case worker. She understands Zee's intelligence and frustration in school. He shows her the drawings he does during class. They're very good. She decides to come up with a new approach.

Together with Zee's principal and teachers, she has put together an alternative curriculum for Zee, something more challenging. He will meet with a psychologist to manage his emotional distress, and she helps him find an after-school art program for inner city youth. In a few months Zee is turning the corner, but what about *other* kids like Zee?

A CASE IN POINT...

Zee's social worker found a path, a way to make his life better. What about other kids in the same situation? Is there an opportunity to extend these services to others? If so how?

1) CREATING INTERNAL BUY-IN | EDUCATE

Sell people on the idea, not the approach. Getting Zee the right set of services meant the Department of Education, Behavioral Health Services and Juvenile Justice Department needed to work toward "maximizing the delivery and efficiency of services across agencies to promote well-being, care and long-term prospects of juveniles."

Each agency contributed data on the factors that led Zee to falter and everyone to understand and support the vision. What barriers did/does he face? When does he improve or regress? In doing so, they identified friction points (stress points) and duplicated efforts as well as determined opportunities for process and service refinement. If this sounds like a customer journey exercise, it is strikingly similar.

The team then worked to establish a set of shared metrics, which included a metric for customer satisfaction (citizen is customer). A shared metric held each agency jointly accountable for reporting back to one another, leadership and the public. Delivery gaps by one agency comprise the entire stream of care, and no individual agency wanted to be reasonable for a downturn in satisfaction. Shared accountability invigorated efforts to find innovative ways to improve the customer experience.

A formalized communication plan set the standards for how, when and where the team would connect. Zee's social worker met with representatives from each agency once a month. In between monthly meetings they contributed to a small information portal with links to useful resources, current programs, local providers, video training and data visualizations showing program metrics. Timely, accurate and accessible information has proved invaluable to the ongoing development of their service offerings and interagency operations.

EDUCATE

ENGAGE

**ENABLE/
EMPOWER**

2) CONNECTING THE OUTSIDE WITH THE INSIDE | *ENGAGE*

We don't tend to think of the public sector as a brand, but in many ways it is. What you represent and how you represent it affect your ability to engage with citizens. It impacts the mechanisms and tools you will use to identify and create desired behaviors.

Collaborative design involves an "agile" approach to coming up with new initiatives and projects. The work in teams is multi-disciplinary from the outset and intended to be iterative as previously unknown information comes to light. Done correctly, it allows for rapid response and adaption to new circumstances. It is supported by natural advocates, like Zee's social worker, who feel committed to the message and vision of the "brand." They always look for new ways to contribute and push for results.

3) KEEPING UP WITH THE TIMES | *EMPOWER*

15 years ago, nobody was thinking about smartphones and tablets as a medium or channel for outreach and communication, but today mobile devices are the leading way to connect with youth. During Zee's after-school program, he takes photos of his work and shares them on Instagram. He tells his story and expresses the value of the program to others, engendering loyalty.

Meanwhile some of the people involved in Zee's journey have decided to build on the new interagency approach. They are looking for ways to operationalize treatment plans across agencies. What metrics do they share currently? What factors predict juveniles "graduating" to the adult justice system? What community factors prevent or deter recidivism?

The change component of these efforts is the lynchpin. It will determine the extent to which the exercise of becoming data-driven falls back to traditional departmental boundary lines or becomes an organizationally shared set of values and practices.

KIMBERLY NEVALA is the Director of Business Strategies for SAS Best Practices. Kimberly brings 19 years of on-the-ground experience advising clients worldwide to help organizations maximize their data potential. She is responsible for market analysis, industry education, emerging best practices and strategies in the areas of business intelligence and analytics, data governance and management.

A speaker and author, Kimberly is often consulted on the topic of strategic enablement and organizational dynamics. Her work has been featured on Information Week, CIO Asia, Knowledge World and TDWI. Kimberly is the author of *The Anatomy of an Analytic Enterprise, Sustainable Data Governance* and *Top 10 Mistakes to Avoid When Launching a Data Governance Program*.

ANALISE POLSKY'S keen understanding of people in diverse cultures gives her depth and insight into data-driven and organizational challenges. As a Thought Leader for SAS Best Practices, she couples her diverse experience as an anthropologist and data whiz to build core assets and deliver dynamic presentations to businesses around the world. Her areas of focus include data visualization, organizational culture and change management, as well as customer analytics. Her multi-lingual background offers a unique ability to help organizations assess strengths and incumbent skills in order to drive strategic shifts in culture, policy and governance. Analise puts the skills she learned while working in the Amazon to use in the corporate jungle – showing organizations how to evolve data practices and principles to meet ever-changing data demands.

sas best practices

THOUGHT PROVOKING BUSINESS