data **MONETIZATION**

FOUNDATIONS

for Data Monetization

a SAS Best Practices white paper

by

Anne **BUFF**

Barbara **H. WIXOM**

Paul **TALLON**

sas best practices

THOUGHT PROVOKING BUSINESS

MITSloan MANAGEMENT

CISR Center for Information Systems Research

About the Research

The comprehensive data monetization research was conducted in three phases, beginning in 2013 and continuing through 2015. In phase 1, MIT CISR researchers conducted seven in-depth case studies of information businesses (companies that monetize data by selling information-based offerings). This phase continued for two years and resulted in a series of case studies, some of which are available as MIT CISR working papers and can be accessed from the Publication Search on the MIT CISR website. In phase 2, MIT CISR researchers interviewed fifty-eight executives who represented thirty-four organizations involved in some form of data monetization. Phase 3 was executed with support from the SAS Best Practices group to analyze the case research data and identify the requirements to operate as an information business. This white paper is informed by all three phases of the MIT CISR and SAS research.

This research was made possible by the support of patrons and sponsors of the MIT Sloan Center for Information Systems Research (CISR) and in particular, MIT CISR patron SAS Institute Inc.

Also published as A. Buff, B.H. Wixom, and P. Tallon, "Foundations for Data Monetization," MIT Sloan CISR Working Paper No. 402, August 2015.

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INTRODUCTION

In a digitized world, there is no question that data is an important firm asset. Operationally, data is required to understand and hone decisions and business processes across the organization. Strategically, data serves as a critical component of the firm's operational backbone for customer engagement and digitized solutions, both of which are foundational for digital strategy.[1]

In some organizations, however, the role of data is shifting—from serving as a secondary asset that supports decisions, processes and digital strategy to a primary asset that businesses can productize and sell. The MIT Center for Information Systems Research (MIT CISR) refers to this new role as data monetization: "The act of exchanging information-based offerings for legal tender or something of perceived equivalent value."[2] Companies that engage in data monetization are in effect running information businesses.

Since 2013, MIT CISR researchers have been investigating information businesses to understand what it takes to generate competitive revenue streams from data monetization. The researchers have discovered that the capabilities and business models for information businesses are unique. Understanding the distinct requirements of an information business sheds light on how organizations should approach data monetization to ensure positive bottom-line results from their efforts.

This white paper is an extension of a research briefing from MIT CISR, "Six Sources of Value for Information Businesses,"[3] and it offers a deeper dive into the data monetization research of MIT CISR and SAS (see "About the Research" for a description of the complete data monetization research portfolio). Here we describe a classification for information offerings, non-negotiable business capabilities required for data monetization, facets of information business cultures and areas of potential competitive advantage.

Understanding the distinct requirements of an information business sheds light on how organizations should approach data monetization.

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[1] J.W. Ross, I.M. Sebastian, and N. Fonstad, "Define Your Digital Strategy - Now," MIT Sloan CISR Research Briefing, Vol. XV, No. 6, June 2015.
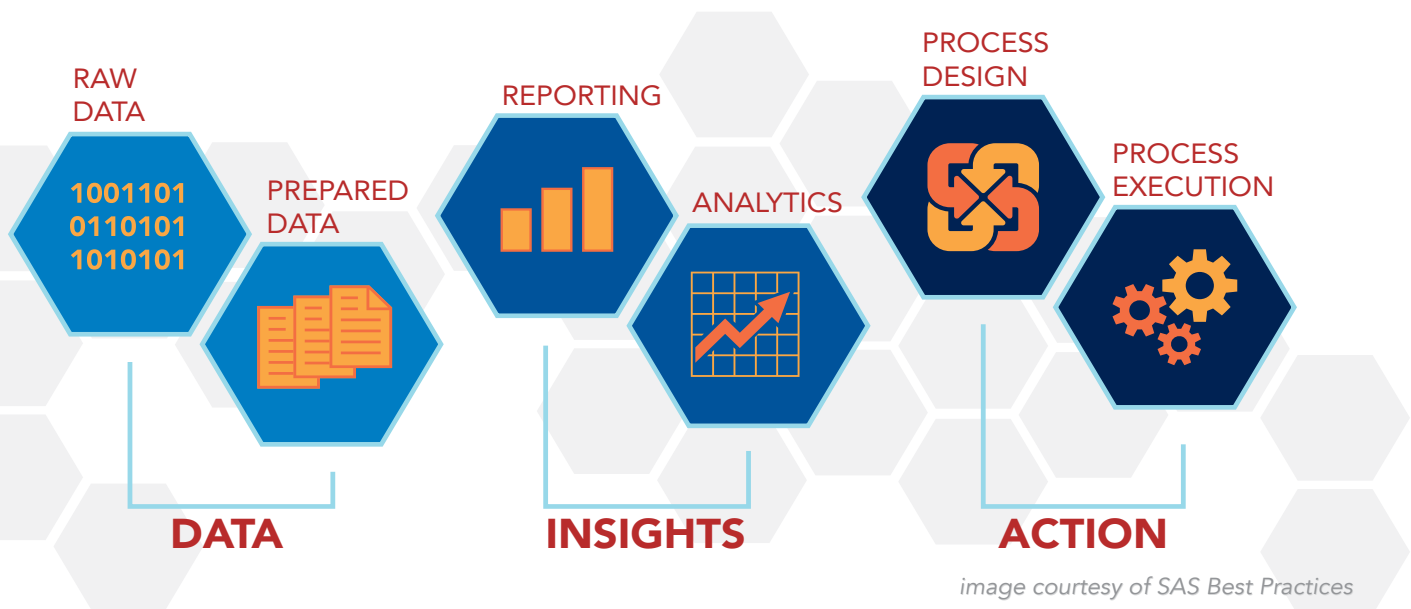
[2] B.H. Wixom, "Cashing In on Your Data," MIT Sloan CISR Research Briefing, Vol. XIV, No. 8, August 2014.

[3] B.H. Wixom, A. Buff, and P. Tallon, "Six Sources of Value for Information Businesses," MIT Sloan CISR Research Briefing, Vol. XV, No. 1, January 2015.

INFORMATION OFFERINGS CONSUMPTION PATH

Data monetization can be used by a company to produce a range of information-based offerings to generate revenue. The range varies from raw data and prepared data to professional services and business process outsourcing. Each specific type of offering can be positioned along a continuum, which we call the *information offerings consumption path* because the continuum forms a path that leads from data to the ultimate consumption of insight by a user (or via automation) with the intent to influence a business process or decision.

The consumption path is made up of three phases – data, insights and action (see figure one) – with each phase sharing common characteristics and considerations. Companies that decide to engage in data monetization can choose any one or a subset of information offerings to productize. Regardless of where it opts to compete along the consumption path, however, a company must be (and remain) keenly aware of the pressing problems of the end customer that are addressed by the path as a whole, as well as the business processes or decisions being influenced. This awareness allows the company to align its offerings with meaningful use cases, which increases the chances of future action by the customer. Moreover, such awareness prepares the company to make adjustments as end customer problems evolve or shift.

RAW DATA · PREPARED DATA → **DATA**

REPORTING · ANALYTICS → **INSIGHTS**

PROCESS DESIGN · PROCESS EXECUTION → **ACTION**

image courtesy of SAS Best Practices

[figure one]

Data Offerings

Data offerings include raw data and prepared data (i.e., data that has been prepared to make it suitable for further analysis and processing, such as by cleansing, categorizing, etc.). These offerings are foundational for the information offering consumption path, because the value of subsequent offerings is bounded by the data quality that the data offerings provide. Companies that choose to monetize raw and prepared data offerings invest heavily in data acquisition platforms, and they develop robust integration and management capabilities.

Data offerings are furthest removed from the final end customer consumption of insight; therefore, it is critical for companies that monetize data offerings to establish mechanisms for understanding the use of the data after it is sold. These mechanisms help companies assess both the value and risk of their monetization activities. Understanding the future value of data offerings increases the effectiveness of a company's product pricing. Understanding future risks informs how contracts should be set up and what mitigative steps might be needed, particularly in cases where data is regulated in some way (e.g., health data, customer data).

RAW DATA

Raw data represents data in its purest form with no cleansing, transformations or enhancements. In some cases, companies that monetize raw data possess transactional data that is of great value to some market (e.g., retail POS data, clinical health data). Other times, companies create raw data sets that are difficult for others to replicate from external or proprietary data sources.

PREPARED DATA

Prepared data is data that has been transformed, enhanced, cleansed, managed, manipulated or improved from its raw state into a prepared form. Companies that provide prepared data offerings create value through the processes that make data more consumable for specific uses. These processes often draw upon deep domain expertise to develop taxonomies, dictionaries and business rules, which increase in accuracy, effectiveness and value over time.

> It is critical for companies that monetize data offerings to establish mechanisms for understanding the use of the data after it is sold.

COMSCORE

comScore Inc. is a leading Internet technology company that measures the activity of users as they navigate the web. It turns those observations into insights and actions for clients so they can maximize the value of their digital investments. The company generated annual revenue of $329 million in 2014, with more than 2,200 customers globally and operations in 23 countries (see comscore.com).

comScore monetizes across the information offering consumption path. Its data offerings are based on 14 petabytes of diversely sourced online data, collected in real time from around the world. The data originates from four primary sources. The first source is panel data, collected from 2 million Internet users. Panel members grant comScore permission to confidentially capture passive measurement of user behavior and demographics. Census data is the second source, gathered from sensors placed with permission on approximately 90 percent of the top 100 US digital media properties.[4] The third data source is perceptual data collected from panel members using proprietary surveys. And the fourth source is data obtained from strategic partners such as dunnhumby. Once captured, this data is processed and integrated in what comScore refers to as its "data factory." comScore uses "old school" manufacturing concepts – continuous control, continuous improvement – to ensure that data quality levels meet standards and to provide transparency regarding the complex environment. Over time, the processes and methodologies are improved and honed.

Customers purchase comScore's data offerings and incorporate them into their reporting and analytics activities. comScore also uses its own data offerings to monetize insights offerings.

Source: B.H. Wixom, J.W. Ross, and C.M. Beath, "comScore, Inc.: Making Analytics Count," MIT Sloan CISR Working Paper No. 392, November 2013.

[4] comScore Media Metrix® Top 100 digital media properties

Reconfigurable and self-service offerings help achieve economies of scale and maximize revenue and margin opportunities.

Insights Offerings

Insights offerings include reports and analytics that directly inform and support business processes and decisions. Companies that monetize insights offerings ensure that their reports and/or analytics are easy to use and useful because they understand that these factors directly influence user adoption. Companies develop ease of use through visualization and dashboard technologies, graphic and interface design expertise, and user training and customer service. They ensure that offerings are useful to end users by crafting configurable and self-service reports and analytical applications that can be tailored and embedded into user workflows.

Companies that monetize insights find that reconfigurable and self-service offerings help achieve economies of scale and maximize revenue and margin opportunities. Subscription and self-service pricing models are common for insights offerings.

REPORTING

Reporting represents business intelligence environments, characterized by dashboards, visualization tools and cloud-based content built atop sophisticated data packaging engines. Although companies that productize reporting provide end-user training and offer extensive product support and hand-holding, these companies also strive to create reporting environments that are highly intuitive and require minimal start-up and training time.

ANALYTICS

Analytics represents a portfolio of methodologies that use mathematical algorithms, statistical modeling and machine learning techniques to find meaningful patterns in data. Analytics offerings differ from reporting because they are predictive and prescriptive – as opposed to descriptive – in nature. Companies that monetize analytics offerings focus on creating understandable, digestible insights, usually by providing interactive visualization tools and performance management interfaces.

HEALTHCARE IQ

Healthcare IQ originated in 1990 as a data management company that offered technology and services to help hospitals make sense of their patient billing data. By 2014, Healthcare IQ had 100 employees and maintained a database representing 1,950 health facilities, over $40 billion in annual spending and 6.8 million unique healthcare products (see hciq.com). The company created this database by extracting hospitals' de-identified data from their transaction systems and placing it in its own data warehouse. There the data is standardized, matched and then made available to hospital users via proprietary data access tools. These activities occur in a highly secure data environment to ensure that hospitals are comfortable with Healthcare IQ's guardianship.

Healthcare IQ monetizes reporting and analytics based on the aggregated data that it curates. The products include benchmarks and indices that tell hospitals where they stand in relation to some comparison group of interest in the market. The products afford customers with an understanding of the true market costs of medical products and can identify savings opportunities.

The company has learned that its tools must be easy to use – customers need to effortlessly identify insights that will inspire meaningful action. Its flagship product Informatics IQ offers a user-friendly web-based interface that customers can navigate with minimal training. In 2011, the company rolled out Colours IQ, an advanced analytics tool that delivers data visualizations via hundreds of thousands of predefined pivot tables.

Customers incorporate Healthcare IQ's insights offerings into their spending management activities. Healthcare IQ also uses its own insights offerings to monetize action offerings, which include on-site consulting support.

Source: B.H. Wixom and C.A. Miller, "Healthcare IQ: Competing as the 'Switzerland' of Health Spend Analytics," MIT Sloan CISR Working Paper No. 400, February 2015.

Action Offerings

Action offerings represent services that help customers act on insights: consulting, on-site support, process automation and process outsourcing. These information offerings are tightly linked to a process in which a decision is made or some problem is solved. Companies that monetize action understand the importance of defined business processes, measurement and the organizational fortitude to consistently execute (which is challenging when behavioral change is required). Action offerings often have change management capabilities "baked in" to fill the gaps for businesses that cannot apply to their organizational environments (for myriad reasons) the insights derived from reporting and analytics.

Customer organizations typically view companies that provide action offerings as business partners that bring advanced technical skills, astute business savviness and deep industry knowledge. Companies that monetize action offerings have consulting or outsourcing business models, which are people intensive. Therefore, they have less scalable operations than companies that monetize earlier along the consumption path.

PROCESS DESIGN

Process design services represent consulting services and on-site support; they use insights from reporting and analytics offerings to create recommendations regarding how a client should change processes and decisions. These companies package recommendations with justification for change, workflow design and measurement strategies.

PROCESS EXECUTION

Process execution services include process automation and outsourced solutions that execute business tasks on behalf of a client, based on insights from reporting and analytics. As third-party providers, companies that offer process execution services assume some portion of the risk and costs associated with the business task. Companies that provide successful execution solutions often do so using a shared savings model.

Companies that monetize action offerings have consulting or outsourcing business models, which are people intensive.

OWENS & MINOR

Owens & Minor Inc. (OM) is a 133-year-old distributor of medical and surgical supplies headquartered in Richmond, VA. It evolved from its beginnings as a local wholesale drug company into the leading distributor of medical and surgical supplies to the acute-care market and a leading provider of health care supply-chain management solutions. At the end of 2014, OM had 5,700 US and 2,100 international employees and reported annualized revenues exceeding $9 billion (see owens-minor.com).

In 1997, OM developed WISDOM (Web Intelligence Supporting Decisions from Owens & Minor), a web-based decision support system that provided reporting and analytics to OM's suppliers and customers. It helped suppliers to better understand what products were being sold, and customers what products they were buying. WISDOM was a key factor in expanding existing and winning new business for OM, while generating a dedicated stream of revenue through subscriptions and fees.

In 2004, Owens & Minor began offering consulting services to customers that wanted tailored help and focused attention; it created a division called OM Solutions to deliver these action offerings. Several years later, OM began to engage in business process outsourcing for select clients by taking over their spending management functions.

Sources: 1. D. Stoller, B. H. Wixom, and H. Watson, "WISDOM Provides Competitive Advantage at Owens & Minor," Society for Information Management (SIM) 2000 Paper Competition. 2. Owens & Minor, Inc. 2014 Annual Report

REQUIRED BUSINESS CAPABILITIES

MIT CISR research identified three sets of business capabilities that serve as "table stakes" for successful data monetization: people, platform and perception.[5] These capabilities are non-negotiable and must be consistently developed and honed for organizations to remain viable as information businesses over time.

People

Brilliant minds lay at the core of information businesses; such companies are replete with naturally curious, technically savvy, collaborative problem solvers. Information businesses strongly value their employees and demonstrate it through effectual talent acquisition and employee development and retention activities. In the MIT CISR case studies, we observed six key roles that information businesses particularly focus on cultivating.

DATA MANAGEMENT/QUALITY PROFESSIONALS

Data professionals ensure that appropriate data management activities are employed and that data quality is appropriate for the context of intended use. These professionals are keenly aware of data's end-to-end lifecycle requirements, and they work to manage the requirements effectively.

DEVELOPERS/DESIGNERS

Developers and designers use agile methodologies and contemporary development technologies to quickly deploy relevant information products and services. They work closely with (or have skills as) specialists in usability, user interface and user experience to develop products that are easy to use.

TECHNICAL ENGINEERS

Hardware and software engineers develop and maintain cost-efficient network and systems infrastructures that provide highly available, secure environments with optimal processing and storage capabilities. These highly skilled engineers are innovative, striving to stay abreast of emerging technology trends and push technology to develop unprecedented solutions that solve complex problems.

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[5] B.H. Wixom, J.W. Ross, C.M. Beath, and C.A. Miller, "Capturing Value from Big Data At comScore Through Platform, People, and Perception," MIT Sloan CISR Research Briefing, Vol. XIII, No. 11, November 2013.

DATA SCIENTISTS, ANALYSTS, STATISTICIANS

These intellectuals use widely varying approaches to modeling, analytics and statistics to explore seemingly endless opportunities from data. Regardless of title, those in this role engage in sophisticated data discovery, exploration and analysis methods to identify monetizable insights.

RECIPROCAL CONSULTANTS

Reciprocal consultants share best practices and professional advice with customers to help users better understand and act upon the company's products and services. Simultaneously, reciprocal consultants assemble user feedback, additional customer requirements, product readjustments and new product ideas that they feed back into the information business to help shape product support, development and innovation processes.

Reciprocal consultants help users better understand and act upon the company's products and services.

STATE STREET GLOBAL EXCHANGE

State Street Corp. provides financial products and services to institutional investors such as mutual funds, corporate and public retirement plans, and insurance companies. In 2014, State Street reported $10.3 billion in sales and $28.2 trillion assets under custody and administration (see statestreet.com).

In 2012, State Street announced a new division called Global Exchange that was charged with bringing together existing components from State Street's research and advisory, analytics, Currenx, Global Link and derivatives-clearing capabilities with new research to develop solutions to address clients' data information and trading challenges. To support the launch of Global Exchange, State Street assembled existing and new talent with impressive credentials and experiences: doctoral degrees and teaching positions from top universities, academic research publications and best paper awards, data science patents and leadership roles in information businesses. Some sat on global, national or industry boards and advisory committees associated with standards and regulation.

For years, State Street maintained strong relationships with professors from MIT and Harvard. In 2015, it established a data science research center in conjunction with new partnerships at the University of California, Berkeley and Stanford University. The lab was intended to investigate next-generation data science techniques in order to manage and mitigate economic and financial risk. That same year, State Street opened GX Labs in Silicon Valley to focus on big data and tech-related product and innovation. GX Labs was intended to support academic relationships as well as local Silicon Valley talent.

Source: H. Baldwin, "In Searching for Big Data Answers, State Street Queries Academia," Forbes, April 27, 2015.

Platform

Information businesses design platforms that meet extreme technical requirements, which their offerings demand. These companies often develop proprietary platforms because mainstream technology and approaches do not fully meet their needs. The platforms include advanced, integrated systems that enable factory-like manipulation and curation of data, rapid speed to market of products and services, and reconfiguration of information offerings. Common attributes of information business platforms from the MIT CISR cases include:

INTEGRATED AND OPEN PLATFORMS

Information businesses use open source software, services architectures and cloud technologies to build extensible and scalable platforms. The platforms are ecosystem-like in their ability to seamlessly plug and play with other technologies and environments, such as client transaction systems.

PERFORMANCE

Information businesses create platforms that can support high-performance processing and availability to develop and deliver offerings that meet aggressive service levels. These companies expect and are prepared for spikes in performance and for exponential growth of data over time.

COST EFFICIENCY, AUTOMATION AND REPURPOSING

Fiscal responsibility is of utmost concern to information businesses, and they fiercely protect margins by managing platform costs. Information business platforms support high reuse; technologists repurpose data and insights offerings to create product derivatives and maximize platform capabilities. Standardization and automation facilitate platform efficiencies.

CONTINUOUS INVESTMENT AND IMPROVEMENT

Information businesses continuously improve their platforms. They develop processes that prioritize upgrade and change requirements, and they carefully measure and monitor platform performance. Many firms have R&D or innovation groups that test emerging technologies to determine when they can be introduced as platform improvements.

> Companies often develop proprietary platforms because mainstream technology and approaches do not fully meet their needs.

ADJUGGLER

AdJuggler, Inc. is a Virginia-based on-demand digital ad services provider that enables media management through a single integrated platform based on the value and preferences of each unique user. The highly scalable SaaS platform serves as the backbone for more than 200 global customers representing more than 5,000 domains, 135 million unique visitors and billions of monthly impressions (see adjuggler.com).

AdJuggler's solutions addressed a fundamental problem for the $50 billion US digital advertising industry. Digital advertisers and other buyers of digital ad space continuously search for sellers of digital ad space, but matching large numbers of these buyers and sellers in near-real time is a highly complex task. Buyers and sellers must be matched in less than the time that it takes an average webpage to download. Speed is everything.

AdJuggler developed a sophisticated platform – the Exchange Media Program – that provides publishers and networks with turnkey access to real-time bidding and direct media buyers with yield management, brand safety and integrated reporting. It relies on data center collocation services to reduce the amount of time needed to match buyers and sellers. Through extensive use of open source and service architectures, ad buyers have direct access to AdJuggler's platform to better manage their ad matching needs, monitor their marketing campaigns and make rapid decisions to improve their effectiveness.

Source: www.adjuggler.com

Perception

Information businesses understand that the more perceptive they are about the existing, evolving and future needs of their clients, the better they can tailor information offerings to continually address compelling problems and decisions. These companies develop a deep understanding of customer needs through domain expertise, customer interaction and environmental scanning. Then, armed with this knowledge, information businesses create useful products and services. We observed three capabilities from the MIT CISR case studies that help strengthen an information business' perception.

DEEP DOMAIN EXPERTISE

Information businesses are intimately familiar with the domains in which they develop offerings, and this familiarity extends past decisions being made and problems being solved into the core business processes that would benefit from being reshaped by insights. Information businesses hire employees who have domain expertise – often because they once worked in positions that the company now serves – and they develop and train employees on domain topics. Some employees are subject matter experts, considered authorities in their vertical or domain area; they have their finger on the pulse of current and looming client problems and needs.

CUSTOMER TOUCH POINTS AND INTERACTION

Information businesses have frequent interactions with their customers across a wide variety of touch points to collect feedback and requirements. Touchpoints vary from sales and service representatives and product feedback techniques to co-creation and beta test experiences. These organizations funnel lessons gleaned from customers into product management, development and innovation processes to help shape new and existing offerings.

ENVIRONMENTAL SCANNING

Environmental scanning allows information businesses to stay in sync with changes that will likely affect them and to proactively adjust strategies and development plans. The scanning manifests as activities such as industry involvement (e.g., conference atten-dance, advisory boards), academic relationships and technology roadmapping.

> Information businesses understand that the more perceptive they are, the better they can tailor information offerings.

VERISK ANALYTICS / VERISK HEALTH

Verisk Analytics Inc. is a 25-year-old analytics company that originated in 1971 as the Insurance Services Office to facilitate state regulatory processes for property and casualty (P&C) insurers across the US. By 2014, Verisk had grown to become a $1.7 billion publicly traded company (NASDAQ: VRSK) that provided risk assessment services and decision analytics for professionals in many fields, including property/casualty insurance, financial services, government, human resources and health care (see verisk.com). Verisk Health serves the latter field and represents Verisk's second-largest business unit.

Although in 2014 the company employed 6,180 employees around the world, it is committed to a "stay small" approach, whereby the company acts small and nimble regardless of size. One company strategy in accomplishing this is having a leadership team with both horizontal and vertical accountability, which helps balance global and local needs. Another strategy is to be perceptive as a company: to deeply understand and address current customer needs and problems and anticipate future concerns.

Verisk develops and evolves perception through heavy customer interaction and teamwork, and activities like sales and support channels, customer conferences and client partnering. The company also benefits from extremely customer-savvy employees whose domain and analytics expertise enables them to understand needs along with relevant trends and environmental shifts. Ultimately, this feeds into new product offerings and business activities. Perception supports a core Verisk leadership goal: customer-centered product innovation.

Source: Verisk Analytics, Following the Verisk Way—2014 Annual Report (2014).

Facets of Culture

In our research, we observed four behaviors and values that manifest in information business cultures to provide a "secret sauce" that brings to life organizations' people, platform and perception. These cultural facets enable information businesses to agilely and effectively respond to customer needs and desires.

R&D FOCUS FOR NEW PRODUCT DEVELOPMENT

Information businesses appreciate that their offerings are under competitive threat shortly after they are launched; in fact, some companies consider their offerings obsolete upon release. In response, they establish R&D activities that focus the company on crafting the next generation of product and service capabilities. Speed to market with new offerings is top priority.

EXPERIMENTATION AND RISK-TAKING

Information businesses embrace failure as a natural by-product of achieving success. Their environments include heavy experimentation and fail-fast processes. Employees in these firms are creative thinkers and inventors who are willing to challenge conventional methods, in part because they are not penalized for taking appropriate risks.

PARTNERING

Partnering allows information businesses to attain requisite resources or capabilities for data monetization that can be difficult or time consuming to build in-house. Information businesses partner with myriad entities, including data source owners, clients, vendors, regulatory bodies, academia, peer organizations and crowds (via crowdsourcing).[6] The partnerships may manifest as short-term transactions that fill gaps or as ongoing, long-term arrangements whereby organizations co-produce offerings using complementary assets and capabilities.

CREDIBILITY AND TRUST

Information businesses understand that credibility and trust are fundamental for establishing long-term customer relationships – and these grow over time through transparency and fairness. Transparency occurs when customers and partners clearly understand the data monetization transaction and feel comfortable with the limitations and controls that are in place. Fairness is premised on fair trade. All stakeholders must believe that they are being treated fairly by the company for the relationship to sustain over time.

Four behaviors and values manifest in information business cultures to provide a "secret sauce" that brings to life organizations' people, platform and perception.

[6] For more information on partnering, look for P.P. Tallon, B.H. Wixom, and A. Buff, "Partnering for Success in Data Monetization," *Business Intelligence Journal*, Vol. 20, No. 3, (2015), forthcoming.

LEXISNEXIS

LexisNexis Group Inc. provides content-enabled workflow solutions designed specifically for professionals in the legal, risk management, corporate, government, law enforcement, accounting and academic markets. In 2014, LexisNexis was a $1.6 billion subsidiary of RELX Group and served customers in more than 100 countries with more than 15,000 employees worldwide (see lexisnexis.com).

For 10 years, LexisNexis developed a proprietary data-intensive computing environment called HPCC (High Performance Computing Cluster) to enable its solutions. The company released HPCC to the public in 2011 as an open-source supercomputing platform to solve big data problems. LexisNexis intended to inspire innovation by partnering with the open source community. Its leadership believed that this partnership would help keep HPCC relevant and superior to other marketplace products, such as Hadoop.

According to LexisNexis, the HPCC ecosystem has grown since its open source launch, with community members, partners, consultants, academia and customers participating. LexisNexis supported the HPCC ecosystem in a variety of ways, such as by establishing an HPCC Centre of Excellence and by providing free online training to help community members learn the platform and associated tools.

Source: www.hpccsystems.com

SOURCES OF COMPETITIVE VALUE

The required business capabilities of people, platform and perception combined with four cultural characteristics lay the foundations for data monetization. To become viable businesses, however, companies that want to monetize must create competitive advantage in the marketplace. SAS and MIT CISR research identified six possible sources of advantage (see figure two).[7] In some cases, companies will develop all six areas to establish their competitive positions; other times, the strength of a given value source may be the only differentiator needed. Organizations that improve and refine their competitive positions over time will create sustained advantage as information businesses.

image courtesy of SAS Best Practices
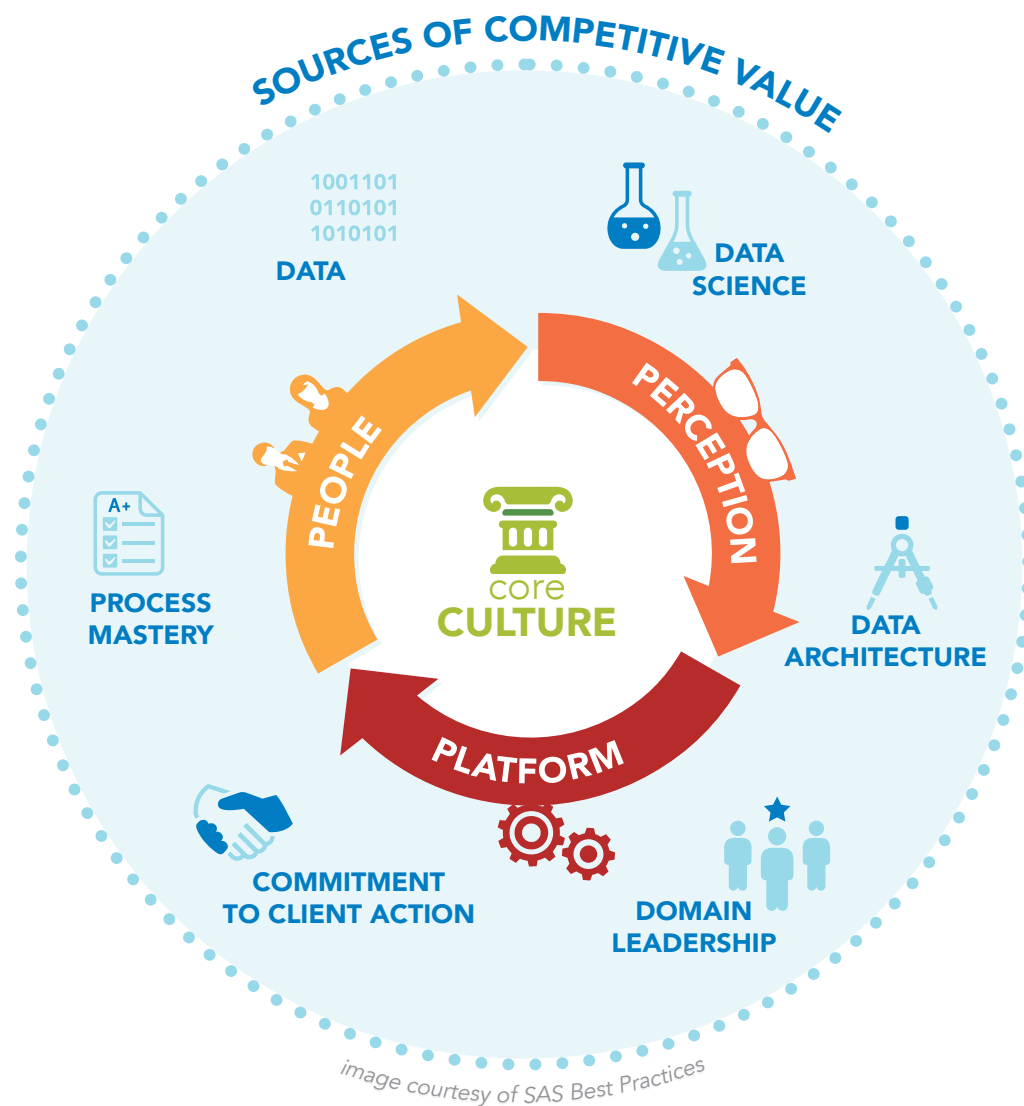
[figure two]

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[7] For more detailed information on the six sources of value, see B.H. Wixom, A. Buff, and P. Tallon, "Six Sources of Value for Information Businesses," MIT Sloan CISR Research Briefing Vol. XV, No. 1, January 2015.

Process mastery creates opportunities for the information business to execute processes on behalf of clients.

1001101
0110101
1010101 DATA

Some data has significant value in the marketplace; its value can be rooted in the data's volume, comprehensiveness, accessibility, speed of ingestion, processing requirements, accuracy or diversity of sources. Information businesses overcome hurdles regarding one or more of these dimensions to meet the needs of those who are unable or unwilling to provision the data themselves.

DATA ARCHITECTURE

Information businesses build data platforms and processes that allow superior data management and provisioning performance at costs significantly below average. These distinctive architectures are built to be too costly or complex for other organizations to replicate.

DATA SCIENCE

Information businesses possess enviable data science arsenals by attracting, training and retaining top talent and supporting it with nurturing data science cultures that ultimately churn out analytics superior to the competition with speed, accuracy and precision.

DOMAIN LEADERSHIP

Deep domain expertise allows information businesses to identify the most pressing business problems and how to effectively solve them. These businesses actively encourage their leaders to be engaged and consistently visible as thought leaders in their industries. They are viewed as credible partners – and often advisors – to their customers.

COMMITMENT TO CLIENT ACTION

Information businesses understand that clients must use and generate business value with their offerings to guarantee recurring revenue streams. This creates urgency in driving client action. Information businesses committed to client action monitor and track client usage of products and services, measure client value generation and offer value-sharing or low-risk pricing structures to encourage clients to benefit from their solutions.

PROCESS MASTERY

Information businesses become masters of the business processes that their offerings inform. Process mastery – combined with established trust and credibility – creates opportunities for the information business to execute processes on behalf of clients, either through an outsourcing arrangement or by automating a client business process.

EXECUTIVE SUMMARY

As businesses forge ahead in the new era of digitization, data is inarguably a core asset. Operationally and strategically, data is a critical component for business decisions, customer engagement and digitized solutions, which are all fundamental to digital strategy. Traditionally, data has served as a valuable asset that supports business decisions and processes. With advancements in technology and data capabilities, some organizations have started to shift data from the role of a supporting asset to that of a primary asset to productize and sell. This new role is defined by MIT CISR as data monetization: "the act of exchanging information-based offerings for legal tender or something of perceived equivalent value."[8] Information offerings include a set of six types of products and services that fall along the information offerings consumption path: raw data, prepared data, reporting, analytics, process design and process execution.

SAS and MIT CISR research on data monetization has identified that information businesses effectively engage in data monetization through a unique blend of foundational capabilities, cultural characteristics and competitive strengths. Companies that establish strong information business foundations can create and sustain a viable data monetization journey.

Companies that establish strong information business foundations can create and sustain a viable data monetization journey.

[8] B.H. Wixom, "Cashing In on Your Data," MIT Sloan CISR Research Briefing, Vol. XIV, No. 8, August 2014.

about the authors

ANNE BUFF is a Business Solutions Manager and Thought Leader for SAS Best Practices, a thought leadership organization at SAS institute. As a speaker and author she specializes in the topics of data governance, MDM, data integration and data monetization. Her energy, excitement and enthusiasm for all things data will grab you in ways you never expected, leaving you refreshed and ready to take on your toughest of data issues.

BARBARA H. WIXOM joined MIT Sloan's Center for Information Systems Research (CISR) in June 2013 as a Principal Research Scientist. Her academic research explores how organizations deliver business value through data. She brings deep expertise in data warehousing, business intelligence, and business analytics capabilities, with particular interest in organizational success, business value, and emerging trends. Prior to joining MIT CISR, she enjoyed a fifteen-year academic career at the University of Virginia.

PAUL P. TALLON is Professor and DeFrancis Chair of Information Systems at Loyola University Maryland. He received a Ph.D. from the University of California Irvine and masters and undergraduate degrees in business from University College Dublin. Before joining academia, he worked as an accountant and systems auditor with PWC in Ireland. He has published in many of the top tier research journals in IT and is listed among the top ten most productive researchers in information systems since 2007.

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