

UDK 004.75

INFONOMICS: THE NEW ECONOMICS OF INFORMATION





D. Laney

Doug Laney

Doug Laney is a best-selling author and recognized authority on data and analytics strategy. He advises senior IT, business and data leaders on data monetization and valuation, data management and governance, alternative data, analytics best practices, and information innovation. Doug's book, Infonomics: How to Monetize, Manage, and Measure Information for Competitive Advantage, was selected by CIO Magazine as the "Must-Read Book of the Year."

Now Principal Data Strategist with Caserta, previously he was a Distinguished Analyst with Gartner's Chief Data Officer research and advisory team. He also launched and managed the Deloitte Analytics Institute, and has been published in the Wall Street Journal, Forbes, and the Financial Times among other journals. He has guest-lectured at major business schools around the world and is now a visiting professor with the University of Illinois Gies College of Business where he teaches "Infonomics" and "Business Analytics Executive Overview" courses, also available online via Coursera

Abstract. Increasingly, IT and business leaders talk about information as one of their most important assets. But few behave as if it is. Executives report to the board on the health of their workforce, their financials, their customers, and their partnerships, but rarely the health of their information assets. And corporations typically exhibit greater discipline in managing and accounting for their office furniture than their data. In this talk, Mr. Laney will share insights from his best-selling book, *Infonomics*, about how organizations can actually treat information as an actual enterprise asset. He will discuss why information both is and isn't an asset and property, and what this means to organizations and data leaders such as chief data officers. And he will cover the issues of information ownership, rights, and privileges, along with alternative data challenges and opportunities, and his set of generally accepted information principles culled from other asset management disciplines. This presentation will be beneficial for those looking to help their organization move beyond the trite "data is an asset" or "data is the new oil" lip-service to actually begin acting that way. Participants will learn and have an opportunity to discuss: how to monetize information assets in a wide variety of ways, including a number of real world examples; how to manage information as an actual asset by apply asset management principles and practices from other asset domains; how to measure information's potential and realized value to help budget for and prove data management benefits; how classic microeconomic concepts can be applied to information for improved data architecture & management, and economic benefits.

<p>1</p> <h1>INFONOMICS</h1> <p>THE NEW ECONOMICS OF INFORMATION</p> <p>Douglas Laney Principal, Data & Analytics Strategy</p> <p>email: doug.laney@caserta.com Twitter: @doug_laney follow: #infonomics</p> 	<p>2</p> <p>Our notions of information predate the Information Age</p> 
--	---

Information is not the "new oil"



Information is:

- ✓ Non-rivalrous
- ✓ Non-depleting
- ✓ Regenerative
- ✓ Nearly limitless
- ✓ Easily transported
- ✓ Cheaper to store
- ✓ Easier to steal
- ✓ Doesn't degrade
- ✓ More ecological
- ✓ Has no alternative

And, it's impossible to clean-up if you spill it.

Caserta Background

Established in 2001

- Award-Winning Consultancy
- Foundation Built on Data
- Strategists, Architects, Engineers, Analysts, Scientists

Strategic Consulting

- Analytics & Data Science
- Data & Analytics Strategy
- Data Monetization & Valuation
- Chief Data Officer Advisory

Data Ecosystem Reengineering

- Data Lake Architecture
- Data Warehousing
- Data Orchestration & Migration

Advanced Technical Implementation

- Data Architecture
- Data Engineering
- Artificial Intelligence

Helping Clients Treat and Deploy Information as an Actual Asset

Is Information an Asset?

“An item of property owned by a person or company, regarded as having value and available to meet debts, commitments, or legacies.”

OED
Oxford English Dictionary

A single item of ownership having exchange value or convertible into cash. Or the total resources of a person or business such as cash, notes, and goodwill.

Merriam-Webster

An asset is a resource with economic value that an individual, corporation or country owns or controls with the expectation that it will provide a future benefit.

INVESTOPEDIA

Assets are probable future economic benefits obtained or controlled by a particular entity as a result of past transactions or events.

IFRS®

Any economic resources (tangible/intangible) that can be owned or produce value. Assets have a positive economic value.

AICPA

Investors are impressed by information-centric companies

3X market-to-book value*

2X market-to-book value*

Average Company

Infosavvy Companies

Infoproduct Companies

* Tobin's 'q' ratio

His book changed the way I think about data and how to manage data to add business value.”

— Joseph M. Sommer, Senior Manager, FSO Data & Analytics, Ernst & Young

ИНФОНОМИКА

“The book is great! I have been encouraging my colleagues to read the new Russian translation.”

— Alexey Lopukhin, Managing Director and CDO, Sberbank

“Doug Laney’s Infonomics book is a great masterpiece. Strongly recommended!”

— Marco Antonio Cavallo, Head of Growth and Market Development, Facebook

INFONOMICS

How to monetize, manage and measure information as an asset for competitive advantage

Best Review

CIO Must-Read Book of the Year

Introducing Infonomics: Treating information as an actual asset

MONETIZING INFORMATION
Generating economic benefits from available information assets

MANAGING INFORMATION
Applying asset management principles and practices to information

MEASURING INFORMATION
Gauging and improving information’s economic characteristics

1 I N F O M A T I C S

INFORMATION AS AN ASSET

MONETIZING | MANAGING | MEASURING

caserta

Generating Myriad Economic Benefits from Information

INDIRECT DATA MONETIZATION

- Improving process performance or effectiveness
- Developing new products or markets
- Building and solidifying partner relationships
- Publishing branded indices

Generating Myriad Economic Benefits from Information

DIRECT MONETIZATION

- Bartering/trading with information
- Enhancing products or services with information
- Selling raw data through brokers or data markets
- Offering insights, analyses and reports
- “Inverted” data monetization (referrals)

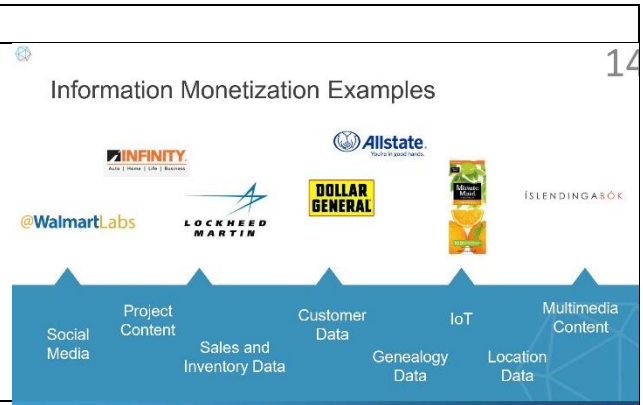
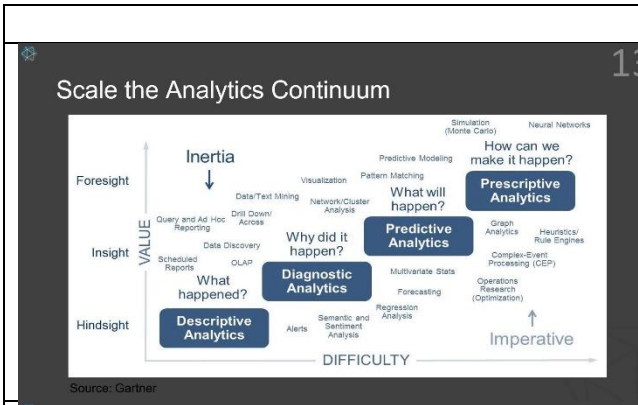
Methods to Monetizing Information

1. Establish an information strategy or information product function
2. Inventory your available information assets
3. Draw inspiration from and adapt how others have monetized data
4. Identify ways to generate direct and indirect economic benefits from each information asset
5. Test monetization ideas for feasibility
6. Prepare data and establish market
7. Gauge success and alter strategy/tactics as necessary

THE SEVEN SOURCES OF DATA

ENTERPRISE, DARK, OPEN, WEB, PARTNER, SOCIAL, SYNDICATED

Your largest sources of data aren't those you own, they are those you don't.

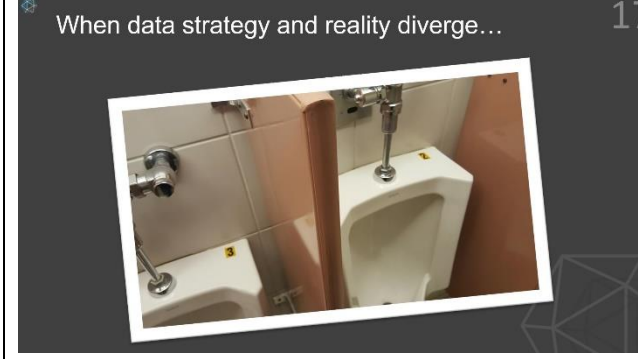


Infonomics Study Eye-Opener:

Organizations with a C-level CDO, are 3x more likely to generate non-monetary commercial value and 7x more likely to generate monetary value from their data externally

INFORMATION AS AN ASSET

MONETIZING | MANAGING | MEASURING



Borrowing from Physical Asset Management

- Raw materials
- Unfinished inventory
- Finished goods
- Storage
- Maintenance (planned and unplanned)
- Replacement
- Standardization
- Disposal
- Transportation
- Resource training
- Safe handling
- Security

Borrowing from Financial Asset Management

- Accounting
- Investment
- Acquisition
- Leverage
- Credit
- Valuation
- Portfolio
- Factoring
- Liquidity
- Volatility

Borrowing from Human Capital Management

- Recruiting
- Hiring
- Training
- Staffing
- Roles
- Teams
- Performance reviews
- Reduction in force
- Termination
- Outsourcing
- Temporary workers

<p>Sources of Asset Management Inspiration 21</p>  <ul style="list-style-type: none"> Physical Asset Management (PAS-55) Supply Chain Management (SCOR) Financial Asset Management ITAM / SAM (ISO 19770) IT Service Management (ITIL) Knowledge Management (KCS) Human Capital Management (P-CMM) Library Science (IFLA) Records Management (ISO 15489) Intellectual Property Management 	<p>22</p> <p>The basis of every great data strategy</p> <p>Generally Accepted Information Principles</p>												
<p>Generally Accepted Information Principles 23</p> <table border="1"> <tr> <td><u>Assumptions</u></td> <td><u>Constraints</u></td> <td><u>Tenets</u></td> </tr> </table>	<u>Assumptions</u>	<u>Constraints</u>	<u>Tenets</u>	<p>Generally Accepted Information Principles 24</p> <table border="1"> <tr> <td><u>Assumptions</u></td> <td></td> <td></td> </tr> <tr> <td>Assumptions are agreed-upon basic beliefs about information. They guide our understanding about how information assets can and should be perceived, managed, and deployed.</td> <td></td> <td></td> </tr> </table>	<u>Assumptions</u>			Assumptions are agreed-upon basic beliefs about information. They guide our understanding about how information assets can and should be perceived, managed, and deployed.					
<u>Assumptions</u>	<u>Constraints</u>	<u>Tenets</u>											
<u>Assumptions</u>													
Assumptions are agreed-upon basic beliefs about information. They guide our understanding about how information assets can and should be perceived, managed, and deployed.													
<p>Generally Accepted Information Principles 25</p> <p>Information should be considered and treated as an asset, because it meets each of the asset criterion</p> <table border="1"> <tr> <td><u>Assumptions</u></td> <td><u>Constraints</u></td> <td><u>Tenets</u></td> </tr> <tr> <td> <ul style="list-style-type: none"> Asset Assumption Proprietorship Assumption Appraisal Assumption Dominion Assumption Benefit Assumption </td> <td> <ul style="list-style-type: none"> Specificity Constraint Recognition Constraint Jurisdiction Constraint Valuation Constraint Resource Constraint </td> <td> <ul style="list-style-type: none"> Relevance Principle Inventory Principle Ownership Principle Authorization Principle Assessment Principle Possession Principle Replicability Principle Optimization Principle </td> </tr> </table>	<u>Assumptions</u>	<u>Constraints</u>	<u>Tenets</u>	<ul style="list-style-type: none"> Asset Assumption Proprietorship Assumption Appraisal Assumption Dominion Assumption Benefit Assumption 	<ul style="list-style-type: none"> Specificity Constraint Recognition Constraint Jurisdiction Constraint Valuation Constraint Resource Constraint 	<ul style="list-style-type: none"> Relevance Principle Inventory Principle Ownership Principle Authorization Principle Assessment Principle Possession Principle Replicability Principle Optimization Principle 	<p>Generally Accepted Information Principles 26</p> <p>An organization's information assets include all forms of data and content of discernible identifiability for which it can claim ownership and/or exclusive control.</p> <table border="1"> <tr> <td><u>Assumptions</u></td> <td><u>Constraints</u></td> <td><u>Tenets</u></td> </tr> <tr> <td> <ul style="list-style-type: none"> Asset Assumption Proprietorship Assumption Appraisal Assumption Dominion Assumption Benefit Assumption </td> <td> <ul style="list-style-type: none"> Specificity Constraint Recognition Constraint Jurisdiction Constraint Valuation Constraint Resource Constraint </td> <td> <ul style="list-style-type: none"> Relevance Principle Inventory Principle Ownership Principle Authorization Principle Assessment Principle Possession Principle Replicability Principle Optimization Principle </td> </tr> </table>	<u>Assumptions</u>	<u>Constraints</u>	<u>Tenets</u>	<ul style="list-style-type: none"> Asset Assumption Proprietorship Assumption Appraisal Assumption Dominion Assumption Benefit Assumption 	<ul style="list-style-type: none"> Specificity Constraint Recognition Constraint Jurisdiction Constraint Valuation Constraint Resource Constraint 	<ul style="list-style-type: none"> Relevance Principle Inventory Principle Ownership Principle Authorization Principle Assessment Principle Possession Principle Replicability Principle Optimization Principle
<u>Assumptions</u>	<u>Constraints</u>	<u>Tenets</u>											
<ul style="list-style-type: none"> Asset Assumption Proprietorship Assumption Appraisal Assumption Dominion Assumption Benefit Assumption 	<ul style="list-style-type: none"> Specificity Constraint Recognition Constraint Jurisdiction Constraint Valuation Constraint Resource Constraint 	<ul style="list-style-type: none"> Relevance Principle Inventory Principle Ownership Principle Authorization Principle Assessment Principle Possession Principle Replicability Principle Optimization Principle 											
<u>Assumptions</u>	<u>Constraints</u>	<u>Tenets</u>											
<ul style="list-style-type: none"> Asset Assumption Proprietorship Assumption Appraisal Assumption Dominion Assumption Benefit Assumption 	<ul style="list-style-type: none"> Specificity Constraint Recognition Constraint Jurisdiction Constraint Valuation Constraint Resource Constraint 	<ul style="list-style-type: none"> Relevance Principle Inventory Principle Ownership Principle Authorization Principle Assessment Principle Possession Principle Replicability Principle Optimization Principle 											
<p>Generally Accepted Information Principles 27</p> <p>Information has uses well beyond its original purpose, does not deplete when used, and can be used simultaneously for different purposes.</p> <table border="1"> <tr> <td><u>Assumptions</u></td> <td><u>Constraints</u></td> <td><u>Tenets</u></td> </tr> <tr> <td> <ul style="list-style-type: none"> Asset Assumption Proprietorship Assumption Appraisal Assumption Dominion Assumption Benefit Assumption </td> <td> <ul style="list-style-type: none"> Specificity Constraint Recognition Constraint Jurisdiction Constraint Valuation Constraint Resource Constraint </td> <td> <ul style="list-style-type: none"> Relevance Principle Inventory Principle Ownership Principle Authorization Principle Assessment Principle Possession Principle Replicability Principle Optimization Principle </td> </tr> </table>	<u>Assumptions</u>	<u>Constraints</u>	<u>Tenets</u>	<ul style="list-style-type: none"> Asset Assumption Proprietorship Assumption Appraisal Assumption Dominion Assumption Benefit Assumption 	<ul style="list-style-type: none"> Specificity Constraint Recognition Constraint Jurisdiction Constraint Valuation Constraint Resource Constraint 	<ul style="list-style-type: none"> Relevance Principle Inventory Principle Ownership Principle Authorization Principle Assessment Principle Possession Principle Replicability Principle Optimization Principle 	<p>Generally Accepted Information Principles 28</p> <table border="1"> <tr> <td></td> <td><u>Constraints</u></td> <td></td> </tr> <tr> <td></td> <td>Constraints are general information regulations, confinements, or bounds. They acknowledge the limits of how well information assets can be monetized, managed, and measured, and therefore restricts how absolutely the tenets can be applied.</td> <td></td> </tr> </table>		<u>Constraints</u>			Constraints are general information regulations, confinements, or bounds. They acknowledge the limits of how well information assets can be monetized, managed, and measured, and therefore restricts how absolutely the tenets can be applied.	
<u>Assumptions</u>	<u>Constraints</u>	<u>Tenets</u>											
<ul style="list-style-type: none"> Asset Assumption Proprietorship Assumption Appraisal Assumption Dominion Assumption Benefit Assumption 	<ul style="list-style-type: none"> Specificity Constraint Recognition Constraint Jurisdiction Constraint Valuation Constraint Resource Constraint 	<ul style="list-style-type: none"> Relevance Principle Inventory Principle Ownership Principle Authorization Principle Assessment Principle Possession Principle Replicability Principle Optimization Principle 											
	<u>Constraints</u>												
	Constraints are general information regulations, confinements, or bounds. They acknowledge the limits of how well information assets can be monetized, managed, and measured, and therefore restricts how absolutely the tenets can be applied.												

<p>29</p> <h3>Generally Accepted Information Principles</h3> <p>The groupings of data or content that comprise an "information asset" will vary from one use case or organization to another.</p> <table border="1"> <thead> <tr> <th>Assumptions</th> <th>Constraints</th> <th>Tenets</th> </tr> </thead> <tbody> <tr> <td>Asset Assumption Proprietorship Assumption Appraisal Assumption Dominion Assumption Benefit Assumption</td> <td>→ Specificity Constraint Recognition Constraint Jurisdiction Constraint Valuation Constraint Resource Constraint</td> <td>Relevance Principle Inventory Principle Ownership Principle Authorization Principle Assessment Principle Possession Principle Replicability Principle Optimization Principle</td> </tr> </tbody> </table>	Assumptions	Constraints	Tenets	Asset Assumption Proprietorship Assumption Appraisal Assumption Dominion Assumption Benefit Assumption	→ Specificity Constraint Recognition Constraint Jurisdiction Constraint Valuation Constraint Resource Constraint	Relevance Principle Inventory Principle Ownership Principle Authorization Principle Assessment Principle Possession Principle Replicability Principle Optimization Principle	<p>30</p> <h3>Generally Accepted Information Principles</h3> <p>Tradeoffs among information asset quality, availability, and accessibility are inevitable.</p> <table border="1"> <thead> <tr> <th>Assumptions</th> <th>Constraints</th> <th>Tenets</th> </tr> </thead> <tbody> <tr> <td>Asset Assumption Proprietorship Assumption Appraisal Assumption Dominion Assumption Benefit Assumption</td> <td>Specificity Constraint Recognition Constraint Jurisdiction Constraint Valuation Constraint → Resource Constraint</td> <td>Relevance Principle Inventory Principle Ownership Principle Authorization Principle Assessment Principle Possession Principle Replicability Principle Optimization Principle</td> </tr> </tbody> </table>	Assumptions	Constraints	Tenets	Asset Assumption Proprietorship Assumption Appraisal Assumption Dominion Assumption Benefit Assumption	Specificity Constraint Recognition Constraint Jurisdiction Constraint Valuation Constraint → Resource Constraint	Relevance Principle Inventory Principle Ownership Principle Authorization Principle Assessment Principle Possession Principle Replicability Principle Optimization Principle
Assumptions	Constraints	Tenets											
Asset Assumption Proprietorship Assumption Appraisal Assumption Dominion Assumption Benefit Assumption	→ Specificity Constraint Recognition Constraint Jurisdiction Constraint Valuation Constraint Resource Constraint	Relevance Principle Inventory Principle Ownership Principle Authorization Principle Assessment Principle Possession Principle Replicability Principle Optimization Principle											
Assumptions	Constraints	Tenets											
Asset Assumption Proprietorship Assumption Appraisal Assumption Dominion Assumption Benefit Assumption	Specificity Constraint Recognition Constraint Jurisdiction Constraint Valuation Constraint → Resource Constraint	Relevance Principle Inventory Principle Ownership Principle Authorization Principle Assessment Principle Possession Principle Replicability Principle Optimization Principle											
<p>31</p> <h3>Generally Accepted Information Principles</h3> <table border="1"> <thead> <tr> <th>Assumptions</th> <th>Constraints</th> <th>Tenets</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td>Tenets are generally agreed-upon axioms that dictate how information assets should be managed, and lead to more detailed guidelines, policies, procedures, and standards specific to the organization.</td> </tr> </tbody> </table>	Assumptions	Constraints	Tenets			Tenets are generally agreed-upon axioms that dictate how information assets should be managed, and lead to more detailed guidelines, policies, procedures, and standards specific to the organization.	<p>32</p> <h3>Generally Accepted Information Principles</h3> <p>Information assets should be managed with at least the same discipline as other recognized assets.</p> <table border="1"> <thead> <tr> <th>Assumptions</th> <th>Constraints</th> <th>Tenets</th> </tr> </thead> <tbody> <tr> <td>Asset Assumption Proprietorship Assumption Appraisal Assumption Dominion Assumption Benefit Assumption</td> <td>Specificity Constraint Recognition Constraint Jurisdiction Constraint Valuation Constraint Resource Constraint</td> <td>→ Relevance Principle Inventory Principle Ownership Principle Authorization Principle Assessment Principle Possession Principle Replicability Principle Optimization Principle</td> </tr> </tbody> </table>	Assumptions	Constraints	Tenets	Asset Assumption Proprietorship Assumption Appraisal Assumption Dominion Assumption Benefit Assumption	Specificity Constraint Recognition Constraint Jurisdiction Constraint Valuation Constraint Resource Constraint	→ Relevance Principle Inventory Principle Ownership Principle Authorization Principle Assessment Principle Possession Principle Replicability Principle Optimization Principle
Assumptions	Constraints	Tenets											
		Tenets are generally agreed-upon axioms that dictate how information assets should be managed, and lead to more detailed guidelines, policies, procedures, and standards specific to the organization.											
Assumptions	Constraints	Tenets											
Asset Assumption Proprietorship Assumption Appraisal Assumption Dominion Assumption Benefit Assumption	Specificity Constraint Recognition Constraint Jurisdiction Constraint Valuation Constraint Resource Constraint	→ Relevance Principle Inventory Principle Ownership Principle Authorization Principle Assessment Principle Possession Principle Replicability Principle Optimization Principle											
<p>33</p> <h3>Generally Accepted Information Principles</h3> <p>Information assets should be cataloged, described, classified, related, and tracked.</p> <table border="1"> <thead> <tr> <th>Assumptions</th> <th>Constraints</th> <th>Tenets</th> </tr> </thead> <tbody> <tr> <td>Asset Assumption Proprietorship Assumption Appraisal Assumption Dominion Assumption Benefit Assumption</td> <td>Specificity Constraint Recognition Constraint Jurisdiction Constraint Valuation Constraint Resource Constraint</td> <td>→ Inventory Principle Relevance Principle Ownership Principle Authorization Principle Assessment Principle Possession Principle Replicability Principle Optimization Principle</td> </tr> </tbody> </table>	Assumptions	Constraints	Tenets	Asset Assumption Proprietorship Assumption Appraisal Assumption Dominion Assumption Benefit Assumption	Specificity Constraint Recognition Constraint Jurisdiction Constraint Valuation Constraint Resource Constraint	→ Inventory Principle Relevance Principle Ownership Principle Authorization Principle Assessment Principle Possession Principle Replicability Principle Optimization Principle	<p>34</p> <h3>Generally Accepted Information Principles</h3> <p>The quality characteristics, cost, value, and risks of any information asset should be knowable at any point in time, and used for prioritizing and budgeting information-related initiatives.</p> <table border="1"> <thead> <tr> <th>Assumptions</th> <th>Constraints</th> <th>Tenets</th> </tr> </thead> <tbody> <tr> <td>Asset Assumption Proprietorship Assumption Appraisal Assumption Dominion Assumption Benefit Assumption</td> <td>Specificity Constraint Recognition Constraint Jurisdiction Constraint Valuation Constraint Resource Constraint</td> <td>Relevance Principle Inventory Principle Ownership Principle Authorization Principle → Assessment Principle Possession Principle Replicability Principle Optimization Principle</td> </tr> </tbody> </table>	Assumptions	Constraints	Tenets	Asset Assumption Proprietorship Assumption Appraisal Assumption Dominion Assumption Benefit Assumption	Specificity Constraint Recognition Constraint Jurisdiction Constraint Valuation Constraint Resource Constraint	Relevance Principle Inventory Principle Ownership Principle Authorization Principle → Assessment Principle Possession Principle Replicability Principle Optimization Principle
Assumptions	Constraints	Tenets											
Asset Assumption Proprietorship Assumption Appraisal Assumption Dominion Assumption Benefit Assumption	Specificity Constraint Recognition Constraint Jurisdiction Constraint Valuation Constraint Resource Constraint	→ Inventory Principle Relevance Principle Ownership Principle Authorization Principle Assessment Principle Possession Principle Replicability Principle Optimization Principle											
Assumptions	Constraints	Tenets											
Asset Assumption Proprietorship Assumption Appraisal Assumption Dominion Assumption Benefit Assumption	Specificity Constraint Recognition Constraint Jurisdiction Constraint Valuation Constraint Resource Constraint	Relevance Principle Inventory Principle Ownership Principle Authorization Principle → Assessment Principle Possession Principle Replicability Principle Optimization Principle											
<p>35</p> <h3>Generally Accepted Information Principles</h3> <p>An information asset should be acquired or retained only if its actual or planned value is greater than its cumulative cost, or as required by laws or other regulations.</p> <table border="1"> <thead> <tr> <th>Assumptions</th> <th>Constraints</th> <th>Tenets</th> </tr> </thead> <tbody> <tr> <td>Asset Assumption Proprietorship Assumption Appraisal Assumption Dominion Assumption Benefit Assumption</td> <td>Specificity Constraint Recognition Constraint Jurisdiction Constraint Valuation Constraint Resource Constraint</td> <td>Relevance Principle Inventory Principle Ownership Principle Authorization Principle Assessment Principle → Possession Principle Replicability Principle Optimization Principle</td> </tr> </tbody> </table>	Assumptions	Constraints	Tenets	Asset Assumption Proprietorship Assumption Appraisal Assumption Dominion Assumption Benefit Assumption	Specificity Constraint Recognition Constraint Jurisdiction Constraint Valuation Constraint Resource Constraint	Relevance Principle Inventory Principle Ownership Principle Authorization Principle Assessment Principle → Possession Principle Replicability Principle Optimization Principle	<p>36</p> <h3>Generally Accepted Information Principles</h3> <p>An information asset should be duplicated only to improve its utility or availability, and only if doing so also increases its net value</p> <table border="1"> <thead> <tr> <th>Assumptions</th> <th>Constraints</th> <th>Tenets</th> </tr> </thead> <tbody> <tr> <td>Asset Assumption Proprietorship Assumption Appraisal Assumption Dominion Assumption Benefit Assumption</td> <td>Specificity Constraint Recognition Constraint Jurisdiction Constraint Valuation Constraint Resource Constraint</td> <td>Relevance Principle Inventory Principle Ownership Principle Authorization Principle Assessment Principle Possession Principle → Replicability Principle Optimization Principle</td> </tr> </tbody> </table>	Assumptions	Constraints	Tenets	Asset Assumption Proprietorship Assumption Appraisal Assumption Dominion Assumption Benefit Assumption	Specificity Constraint Recognition Constraint Jurisdiction Constraint Valuation Constraint Resource Constraint	Relevance Principle Inventory Principle Ownership Principle Authorization Principle Assessment Principle Possession Principle → Replicability Principle Optimization Principle
Assumptions	Constraints	Tenets											
Asset Assumption Proprietorship Assumption Appraisal Assumption Dominion Assumption Benefit Assumption	Specificity Constraint Recognition Constraint Jurisdiction Constraint Valuation Constraint Resource Constraint	Relevance Principle Inventory Principle Ownership Principle Authorization Principle Assessment Principle → Possession Principle Replicability Principle Optimization Principle											
Assumptions	Constraints	Tenets											
Asset Assumption Proprietorship Assumption Appraisal Assumption Dominion Assumption Benefit Assumption	Specificity Constraint Recognition Constraint Jurisdiction Constraint Valuation Constraint Resource Constraint	Relevance Principle Inventory Principle Ownership Principle Authorization Principle Assessment Principle Possession Principle → Replicability Principle Optimization Principle											

Assess and mature your data & analytics capabilities

Over 200 distinct best-practice indicators

Infonomics Study Eye-Opener:

Organizations with CDOs are 3x more likely to share data freely across business units.

INFORMATION AS AN ASSET

MONETIZING | MANAGING | MEASURING

Three Degrees of Information Value

Performance Gap | Vision Gap

Realized	Probable	Potential
Based on your current capabilities and execution	Based on your expected capabilities and plans	If you applied the data to all relevant business processes

Dr. George E. P. Box

"All models are wrong, but some are useful."

Information Valuation Models

Foundational Measures How correct, complete and exclusive is this data? Intrinsic Value of Information (IVI) How good and relevant is this data for specific purposes? Business Value of Information (BVI) How does this data affect key business drivers? Performance Value of Information (PVI)	Leading Indicators (Potential Value) Improve information management discipline Improve information's economic benefits Lagging Indicators (Realized Value)	Financial Measures What did it cost to collect this data, or if we were to lose it? Cost Value of Information (CVI) What could we get from selling or trading this data? Market Value of Information (MVI) How does this data contribute to revenue / expense savings? Economic Value of Information (EVI)
---	---	--

Foundational Value of Information

Foundational Measures How correct, complete and exclusive is this data? Intrinsic Value of Information (IVI) How good and relevant is this data for specific purposes? Business Value of Information (BVI) How does this data affect key business drivers? Performance Value of Information (PVI)	$IVI = \text{Validity} + \text{Completeness} + (1 - \text{Scarcity}) \cdot \text{Life Cycle}$ $BVI = \sum_{p=1}^n (\text{Relevance}_p) \cdot \text{Validity} \cdot \text{Completeness} \cdot \text{Timeliness}$ $PVI = \left(\frac{KPI}{KPL} - 1 \right) \cdot T/t$
---	--

Financial Value of Information

$CVI = \frac{\text{ProcExp} \cdot \text{Attrib} \cdot T}{t} \left\{ + \sum_{p=0}^n \text{Lost Revenue}_p \right\}$ $MVI = \frac{\text{Exclusive Price} \cdot \text{Number of Partners}}{\text{Premium}}$ $EVI = [\text{Revenue}_t - \text{Revenue}_c - (\text{AcqExp} + \text{AdmExp} + \text{AppExp})] \cdot T/t$	Financial Measures What would it cost us if we lost this data? Cost Value of Information (CVI) What could we get from selling or trading this data? Market Value of Information (MVI) How does this data contribute to our bottom line? Economic Value of Information (EVI)
--	---

Applying the Information Valuation Models

<p>INVESTMENT: Prioritize and fund information management initiatives for information assets with low intrinsic value and high business value.</p>	<p>MONETIZE/ANALYTICS: Determine the market ability of information assets, i.e., those with high quality, low cost and high external business relevancy.</p>
<p>GOVERNANCE: Cause how improving data quality metrics (intrinsic value) affects key performance indicators.</p>	<p>ENHANCED VALUE: Determine how much additional economic value can be achieved by monetizing information assets.</p>
<p>INNOVATION/DIGITAL: Identify information with high potential business relevance that could be driving more economic benefits.</p>	<p>LIFE CYCLE EXPENSE: Dispose of information that costs more to capture and retain than its economic benefits.</p>

Source: "Infonomics: How to Monetize, Manage, and Measure Information for Competitive Advantage"

Infonomics Study Eye-Opener:

Organizations with a C-level CDO are 4x more likely to be using data to transform business processes, products or services. Those with a "CDO lite" (non-exec) are 2x as likely.

INFORMATION AS AN ASSET

MONETIZING | MANAGING | MEASURING
Bonus: INFORMATION ECONOMICS

Some Thoughts on the Unique Economics of Information

- The principle of **supply and demand** operates differently with information than with other assets.
- The forces of information **pricing and elasticity** affect everything, from data markets to data security.
- The **marginal utility** of information for both human and technology-based consumers of information should drive business and architecture decisions.
- How the **opportunity costs** of certain information assets must be factored into selecting and publishing them.
- How the information **production possibility frontier** affects information-related behavior and investments.
- The **information yield curve** concept can gauge the relative affects of information asset management maturation.

Recommendations

- ✓ Monetize your (and others!) information in a variety of ways.
- ✓ Manage your information with the same discipline as your other assets.
- ✓ Measure and improve your information's potential and realized value.
- ✓ Understand and take advantage of information's unique economic characteristics.

Elevate Your Data Strategy

- Caserta.com
- doug.laney@caserta.com
- @doug_laney
- Follow #Infonomics on Twitter & LinkedIn
- Become certified on Infonomics via Coursera
- Download the Caserta CDO Whitepaper: <http://bit.ly/info-savvy>

CIO Must-Read Book of the Year.

THE RIGHT PARTNER FOR YOUR DATA JOURNEY

Transformative Strategic Consulting & Advanced Technical Implementation