

# INFONOMICS

## THE NEW ECONOMICS OF INFORMATION

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Our notions of information  
predate the Information Age



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.*





# 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.



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.



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.



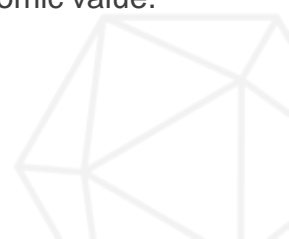
Asset is a resource controlled by the entity as a result of past events and from which future economic benefits are expected to flow to the entity.



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



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



# Investors are impressed by information-centric companies



Average Company

2X market-to-book value\*



Infosavvy Companies

3X market-to-book value\*



Infoproduct Companies

\* Tobin's "q" ratio



# Introducing Infonomics: Treating information as an actual asset

## **MONETIZING INFORMATION**

Generating  
economic benefits  
from available  
information assets



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## **MANAGING INFORMATION**

Applying asset  
management principles and  
practices to information



## **MEASURING INFORMATION**

Gauging and improving  
information's economic  
characteristics

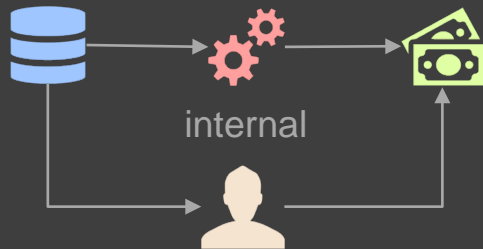
# INFORMATION AS AN ASSET

MONETIZING | MANAGING | MEASURING





# Generating Myriad Economic Benefits from Information



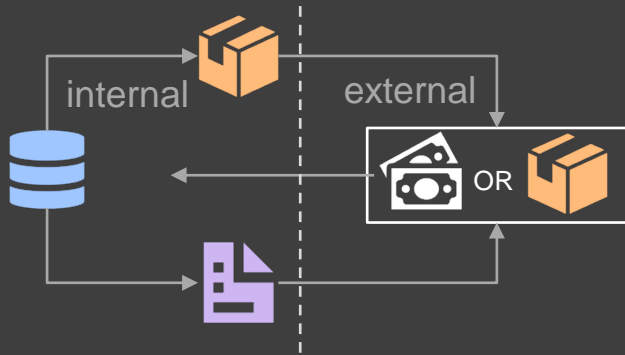
## INDIRECT DATA MONETIZATION

- 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

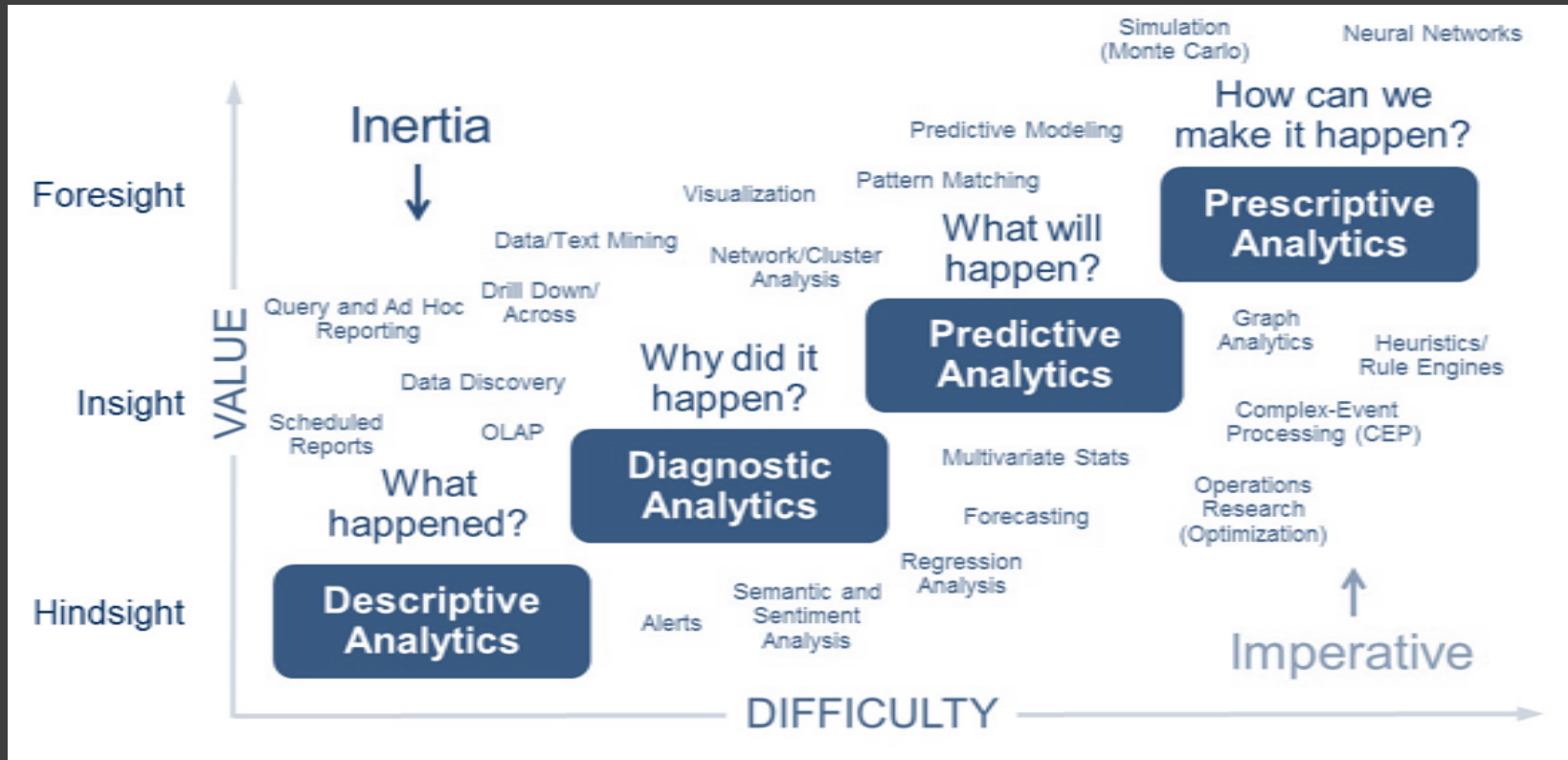


SYNDICATED

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



# Scale the Analytics Continuum





# Information Monetization Examples



ÍSLENDINGABÓK

@WalmartLabs



Social  
Media

Project  
Content

Sales and  
Inventory Data

Customer  
Data

Genealogy  
Data

IoT

Location  
Data

Multimedia  
Content



## 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







# When data strategy and reality diverge...





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

# Borrowing from Physical Asset Management





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

# Borrowing from Financial Asset Management





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

# Borrowing from Human Capital Management





# Sources of Asset Management Inspiration



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



The basis of every great data strategy

# **Generally Accepted Information Principles**







# Generally Accepted Information Principles

Assumptions

Constraints

Tenets





# Generally Accepted Information Principles

## Assumptions

Assumptions are agreed-upon basic beliefs about information. They guide our understanding about how information assets can and should be perceived, managed, and deployed.





# Generally Accepted Information Principles

Information should be considered and treated as an asset, because it meets each of the asset criterion

## Assumptions

### ➔ **Asset Assumption**

Proprietorship Assumption  
Appraisal Assumption  
Dominion Assumption  
Benefit Assumption

## Constraints

Specificity Constraint  
Recognition Constraint  
Jurisdiction Constraint  
Valuation Constraint  
Resource Constraint

## Tenets

Relevance Principle  
Inventory Principle  
Ownership Principle  
Authorization Principle  
Assessment Principle  
Possession Principle  
Replicability Principle  
Optimization Principle



# Generally Accepted Information Principles

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.

## Assumptions

Asset Assumption

➔ **Proprietorship Assumption**

Appraisal Assumption

Dominion Assumption

Benefit Assumption

## Constraints

Specificity Constraint

Recognition Constraint

Jurisdiction Constraint

Valuation Constraint

Resource Constraint

## Tenets

Relevance Principle

Inventory Principle

Ownership Principle

Authorization Principle

Assessment Principle

Possession Principle

Replicability Principle

Optimization Principle



# Generally Accepted Information Principles

Information has uses well beyond its original purpose, does not deplete when used, and can be used simultaneously for different purposes.

## Assumptions

Asset Assumption

Proprietorship Assumption

Appraisal Assumption

Dominion Assumption

➔ **Benefit Assumption**

## Constraints

Specificity Constraint

Recognition Constraint

Jurisdiction Constraint

Valuation Constraint

Resource Constraint

## Tenets

Relevance Principle

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Possession Principle

Replicability Principle

Optimization Principle



# Generally Accepted Information Principles

## Constraints

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.







# Generally Accepted Information Principles

The groupings of data or content that comprise an “information asset” will vary from one use case or organization to another.

## Assumptions

Asset Assumption  
Proprietorship Assumption  
Appraisal Assumption  
Dominion Assumption  
Benefit Assumption



## Constraints

**Specificity Constraint**  
Recognition Constraint  
Jurisdiction Constraint  
Valuation Constraint  
Resource Constraint

## Tenets

Relevance Principle  
Inventory Principle  
Ownership Principle  
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Optimization Principle



# Generally Accepted Information Principles

Tradeoffs among information asset quality, availability, and accessibility are inevitable.

## Assumptions

Asset Assumption  
Proprietorship Assumption  
Appraisal Assumption  
Dominion Assumption  
Benefit Assumption

## Constraints

Specificity Constraint  
Recognition Constraint  
Jurisdiction Constraint  
Valuation Constraint



**Resource Constraint**

## Tenets

Relevance Principle  
Inventory Principle  
Ownership Principle  
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Optimization Principle



# Generally Accepted Information Principles

## 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.



# Generally Accepted Information Principles

Information assets should be managed with at least the same discipline as other recognized assets.

## Assumptions

Asset Assumption  
Proprietorship Assumption  
Appraisal Assumption  
Dominion Assumption  
Benefit Assumption

## Constraints

Specificity Constraint  
Recognition Constraint  
Jurisdiction Constraint  
Valuation Constraint  
Resource Constraint

## Tenets

➔ **Relevance Principle**  
Inventory Principle  
Ownership Principle  
Authorization Principle  
Assessment Principle  
Possession Principle  
Replicability Principle  
Optimization Principle



# Generally Accepted Information Principles

Information assets should be cataloged, described, classified, related, and tracked.

## Assumptions

Asset Assumption  
Proprietorship Assumption  
Appraisal Assumption  
Dominion Assumption  
Benefit Assumption

## Constraints

Specificity Constraint  
Recognition Constraint  
Jurisdiction Constraint  
Valuation Constraint  
Resource Constraint

## Tenets

Relevance Principle  
→ **Inventory Principle**  
Ownership Principle  
Authorization Principle  
Assessment Principle  
Possession Principle  
Replicability Principle  
Optimization Principle



# Generally Accepted Information Principles

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.

## Assumptions

Asset Assumption  
Proprietorship Assumption  
Appraisal Assumption  
Dominion Assumption  
Benefit Assumption

## Constraints

Specificity Constraint  
Recognition Constraint  
Jurisdiction Constraint  
Valuation Constraint  
Resource Constraint

## Tenets

Relevance Principle  
Inventory Principle  
Ownership Principle  
Authorization Principle  
➔ **Assessment Principle**  
Possession Principle  
Replicability Principle  
Optimization Principle



# Generally Accepted Information Principles

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.

## Assumptions

Asset Assumption  
Proprietorship Assumption  
Appraisal Assumption  
Dominion Assumption  
Benefit Assumption

## Constraints

Specificity Constraint  
Recognition Constraint  
Jurisdiction Constraint  
Valuation Constraint  
Resource Constraint

## Tenets

Relevance Principle  
Inventory Principle  
Ownership Principle  
Authorization Principle  
Assessment Principle  
→ **Possession Principle**  
Replicability Principle  
Optimization Principle



# Generally Accepted Information Principles

An information asset should be duplicated only to improve its utility or availability, and only if doing so also increases its net value

## Assumptions

Asset Assumption  
Proprietorship Assumption  
Appraisal Assumption  
Dominion Assumption  
Benefit Assumption

## Constraints

Specificity Constraint  
Recognition Constraint  
Jurisdiction Constraint  
Valuation Constraint  
Resource Constraint

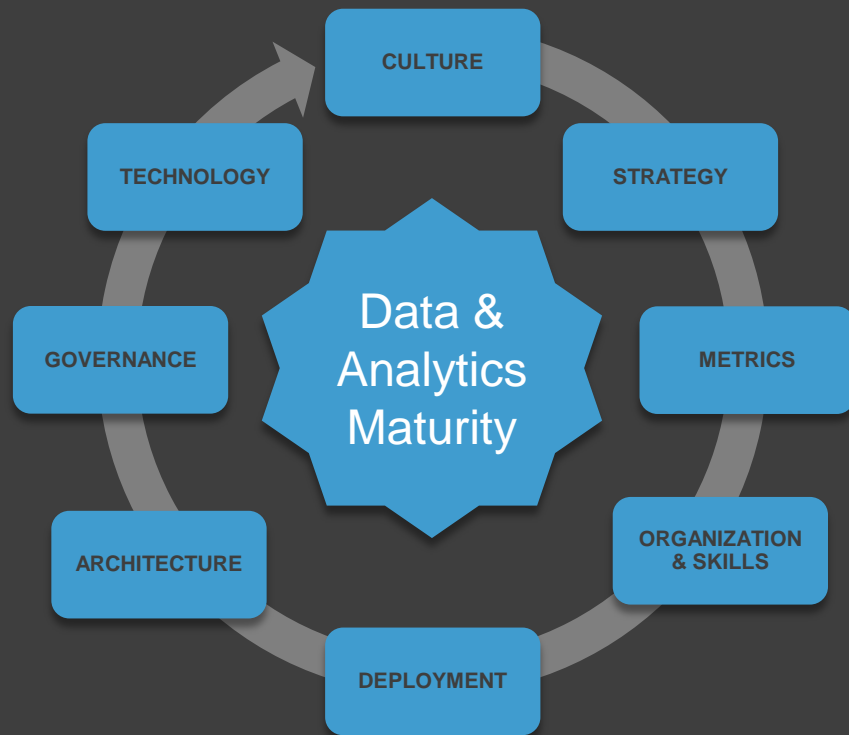
## Tenets

Relevance Principle  
Inventory Principle  
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→ **Replicability Principle**  
Optimization Principle





# Assess and mature your data & analytics capabilities



*Over 200 distinct best-practice indicators.*



5	Optimized
4	Managed
3	Proactive
2	Reactive
1	Aware



Infonomics Study Eye-Opener:

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

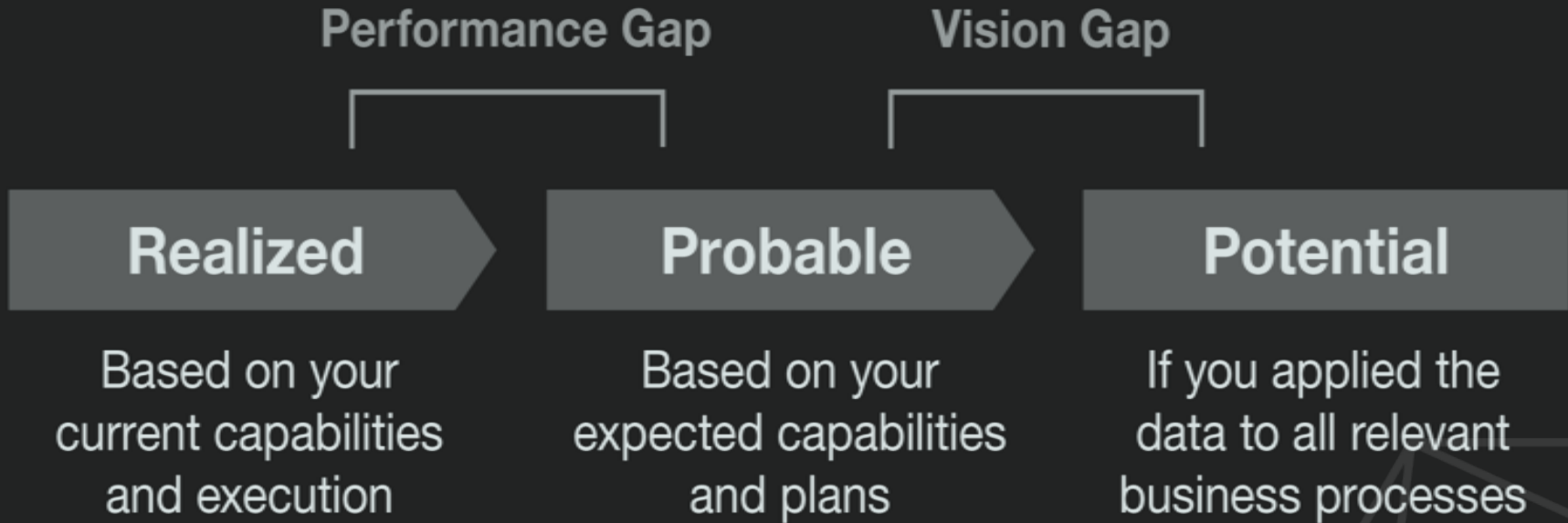


# INFORMATION AS AN ASSET

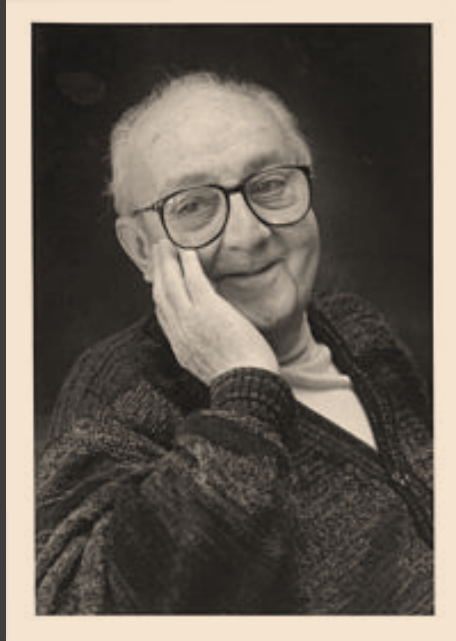
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# Three Degrees of Information Value



Dr. George E. P. Box

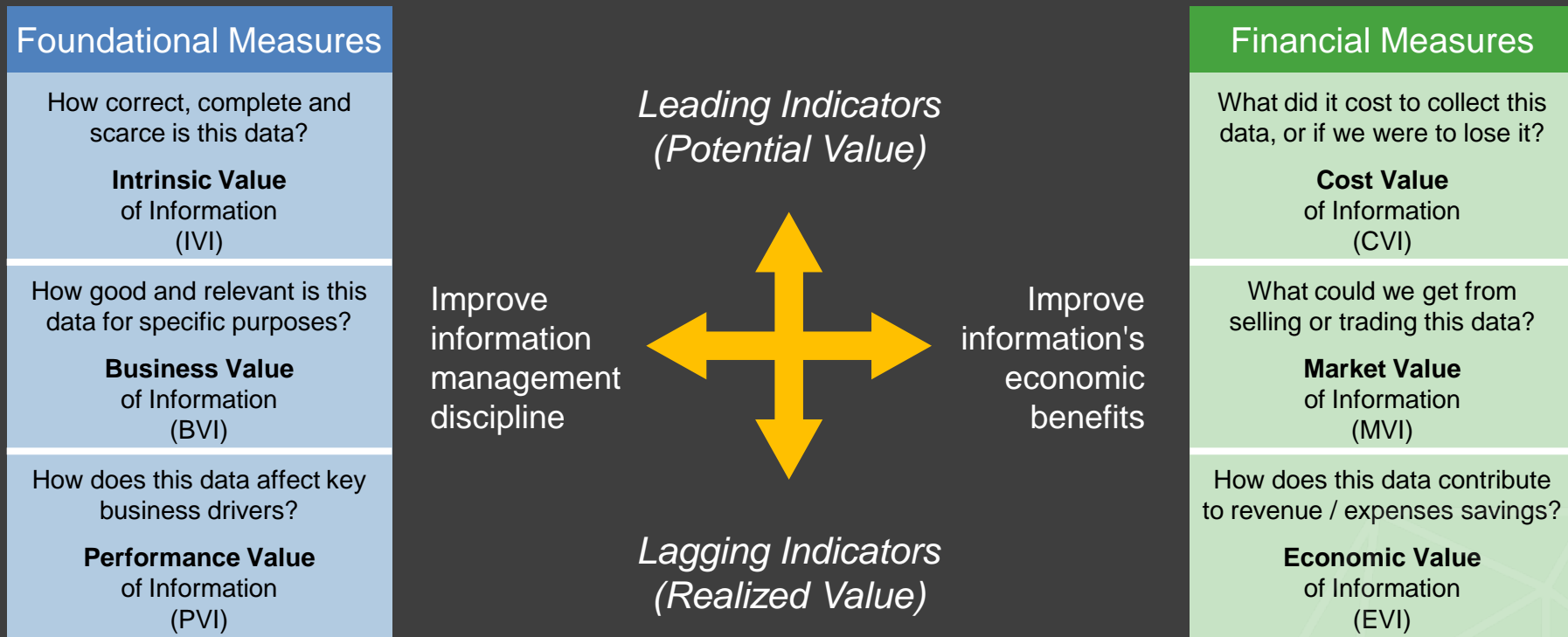


*“All models are wrong,  
but some are useful.”*



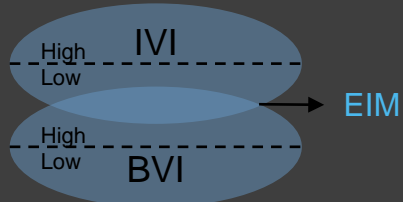


# Information Valuation Models

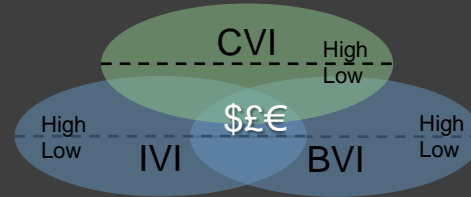




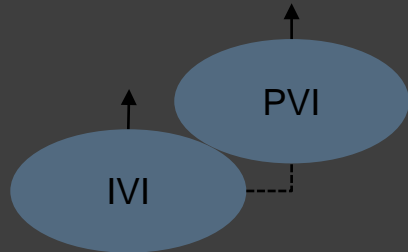
# Applying the Information Valuation Models



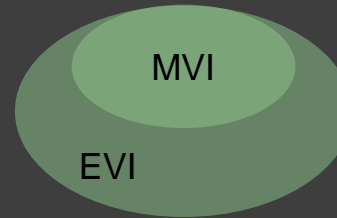
**INVESTMENT:**  
Prioritize and fund information management initiatives for information assets with low intrinsic value and high business value.



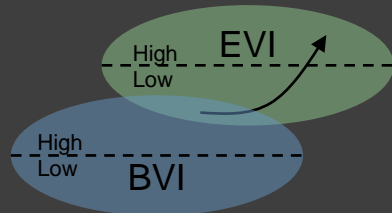
**MONETIZE/ANALYTICS:**  
Determine the market ability of information assets, i.e., those with high quality, low cost and high external business relevancy.



**GOVERNANCE:**  
Gauge how improving data quality metrics (intrinsic value) affects key performance indicators.



**ENHANCED VALUE:**  
Determine how much additional economic value can be achieved by monetizing information assets.



**INNOVATION/DIGITAL:**  
Identify information with high potential business relevance that could be driving more economic benefits.



**LIFE CYCLE EXPENSE:**  
Dispose of information that costs more to capture and retain than its economic benefits.



## 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.





# Recommendations

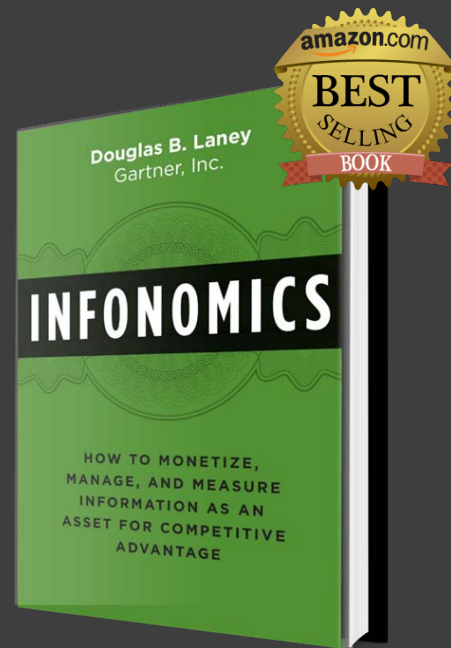
- ✓ Monetize your (and others!) information in a variety of ways.
- ✓ Manage your information with the same discipline as your other assets.
- ✓ Measure and improve your information's potential and realized value.
- ✓ Understand and take advantage of information's unique economic characteristics.





# Elevate Your Data Strategy

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Must-Read Book  
of the Year.