

DIY BI: Implementing Self-Service BI

Solve your business puzzles with **Intelligent Solutions**



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A thought leader, visionary, and practitioner in the rapidly growing field of business intelligence, Claudia Imhoff, Ph.D., is an internationally recognized expert on analytics, business intelligence, and the infrastructure to support these initiatives. Dr. Imhoff has co-authored five highly-regarded and popular books on these subjects and writes articles (totaling more than 100) for technical and business magazines.

The Boulder BI Brain Trust is a consortium of independent analysts and consultants dedicated to furthering business intelligence.





Self-Service BI: Topics

➔ What is Self-Service BI?

Information Worker Requirements

Technology Solutions for Self-Service BI

Getting Started





Self-Service BI: Definition

Self-service business intelligence consists of the facilities within the BI environment that enable BI users to become more self-reliant and less dependent on the IT organization

Self-service BI \neq BI self sufficiency





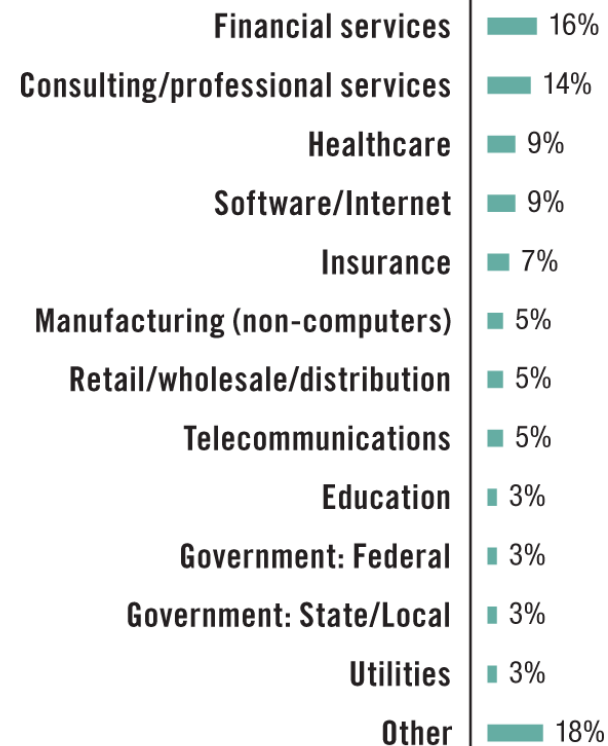
TDWI Self-Service BI Survey, March 2011

Responses from 587 respondents were used as the core data sample for the report

Survey respondents were corporate IT professionals (58%), consultants (23%), or business sponsors/users (19%)

Respondents were from the United States (53%), Europe (20%), Canada (8%), Asia (6%), Australia (4%), Central/South America (3%) and several other areas (6%)

Industry



("Other" consists of multiple industries, each represented by 2% or less of respondents.)





Drivers for Self-Service BI

- Constantly changing business needs – 65%
 - Inability to match speed of business change
- IT inability to satisfy new requests in timely manner – 57%
 - If IT cannot satisfy users fast enough, users will go around IT
- Need to be a more analytics-driven organization – 54%
 - Users need more information faster
- Slow or untimely access to information – 47%
 - Some users want unfettered access to data to create reports
- Business user dissatisfaction with IT-delivered BI capabilities – 34%
 - Long delivery times may result in BI capabilities that are no longer relevant





Benefits to IT of Self-Service BI

- IT can step aside in many cases as an intermediary
 - Gives users what they wanted for years – more satisfaction
- IT can focus on more value-added activities
 - Developing new applications
 - Expanding data in data warehouse and improving its quality
 - Incorporating new technologies to improve performance
- IT becomes more of a partner rather than a roadblock to business users
 - Business users more responsible for BI capabilities
 - IT more supportive of business needs





Self-Service BI: Topics

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➔ Information Worker Requirements

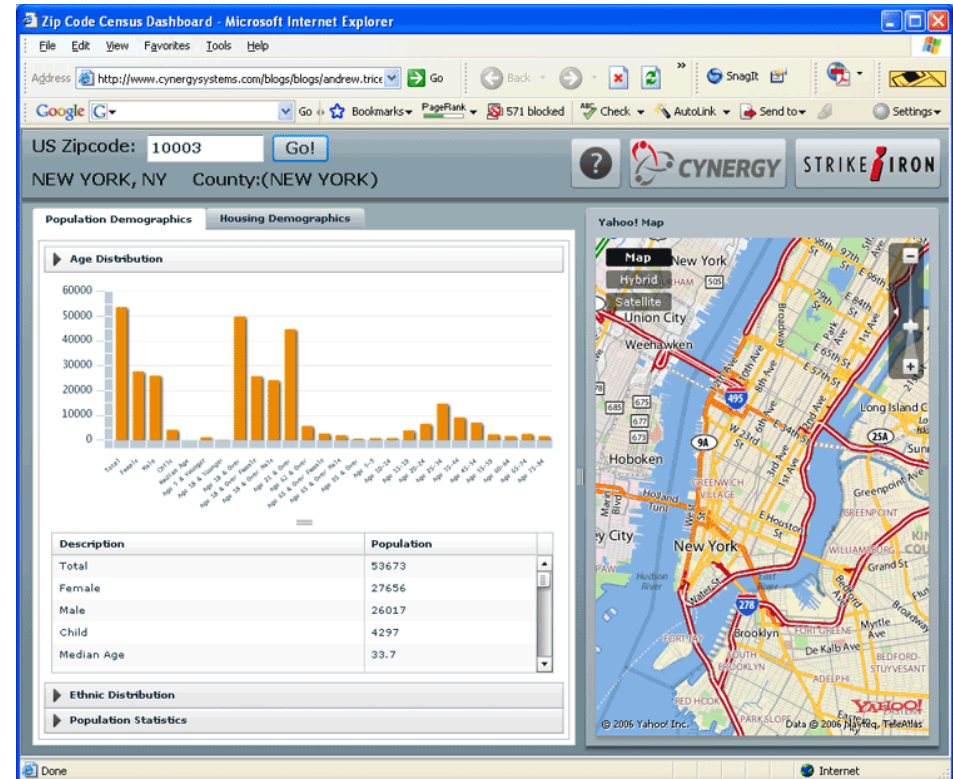
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Information Producer

- Improves business operations and make tactical and strategic decisions
- Explores, analyzes, and produces actionable BI analytics
- Builds customizable BI components and publishes BI-related information for use by information consumers
- Participates in self-service BI governance committee
- Users: power business users and business analysts



Information Consumer

- Task-oriented business users who consume BI to support day-to-day operations
- Gathers info to increase personal knowledge, make decisions but doesn't have time, experience or inclination to create needed inputs
- Information may be delivered by:
 - Operational applications, e.g., available services or products
 - Analytical applications, e.g., report or dashboard
 - Collaborative applications, e.g., e-mail, intelligent portal
- Users: general public, customers, partners, suppliers, employees





Information Collaborator

- Improves the knowledge content and expertise of an organization and other information workers (especially information consumers)
- Use experience, expertise, opinions to add business content to analytics
- Knowledge is typically added using collaborative applications, usually involves a form of social computing
- Examples includes feedback and commentary, ratings, tagging, sources of related information and expertise, expert communities
- Users: new and motivated information workers, subject matter experts, researchers



BI/DW Builder

- Traditionally responsible for building data warehouse and/or BI solutions
- Due to budget, resource, or priority issues are often bottlenecks in deploying BI
- For DIY BI are responsible for:
 - Providing access to source data, ideally via common business views
 - Developing customizable BI components for use by other IWs
 - Participating in self-service BI governance committee
 - Monitoring use of self-service BI solutions by other IWs
- Users: central/business unit IT, information producers





Types of Information Worker

BI/DW Builders
(central/business unit IT)



Information Producers
(power business users
& business analysts)



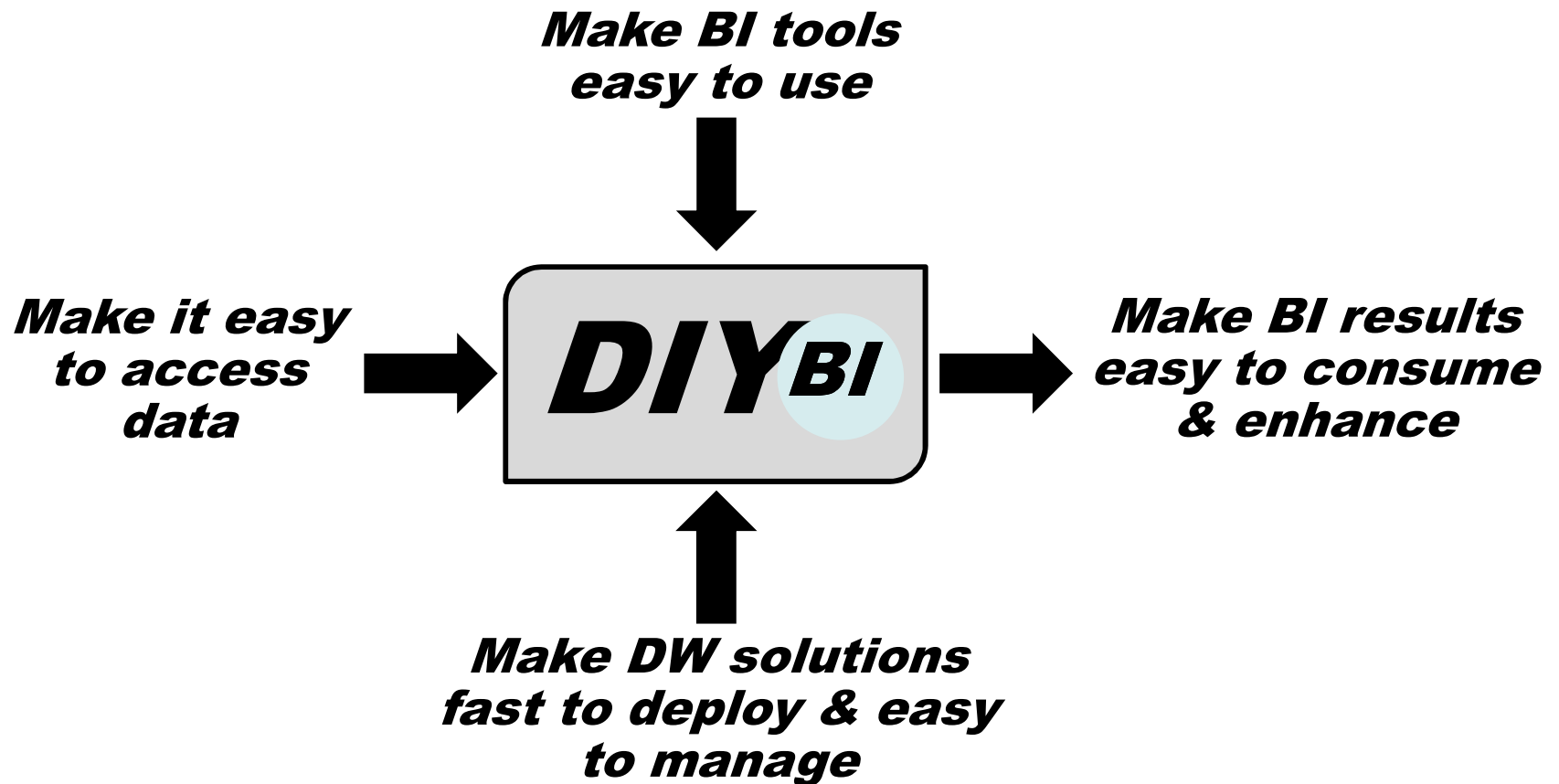
Information Consumers
(task-oriented
business users)




Information Collaborators
(subject matter experts &
new/motivated IWs)



Self-Service BI: Four Key Objectives





Make BI Results Easy to Consume & Enhance

- Enables information consumers to become more self-reliant and make faster decisions
- Allows information collaborators to improve information content and enable more informed decision making
- Self-Service BI requirements:
 - Easy to discover, access and share
 - Published to a device and through a user interface of choice
 - Personalized, actionable and easy to use format
 - Clear business definition and data lineage
 - Increase information content and context through IW interaction and feedback, track IW interactions & decisions





Make BI Tools Easy to Use

- Improves the productivity of BI/DW builders and information producers
- Enables self-service BI by allowing motivated information consumers to become information producers
- Self-Service BI Requirements:
 - Make it easy to report on and analyze data
 - Support more sophisticated analyses
 - Make results easy to publish in the required format





Make DW Solutions Fast to Deploy & Easy to Manage

- Improves the productivity of both BI/DW builders and information producers
- Provides faster time to value
- Enables applications to be built that were not possible with earlier technologies
- Enables a business unit to deploy its own solutions
- Self-Service BI requirements:
 - Support lower-cost BI/DW solutions that are easy to administer
 - Provide good performance and scalability for complex analytical workloads and high data volumes





Make it Easy to Access Data

- Improves the productivity of both BI/DW builders and information producers
- Enables self-service BI by enabling motivated information consumers to become information producers
- Self-Service BI Requirements:
 - Make dispersed data easy to access without IT assistance
 - Support new types of business data and business content





Self-Service BI: Topics

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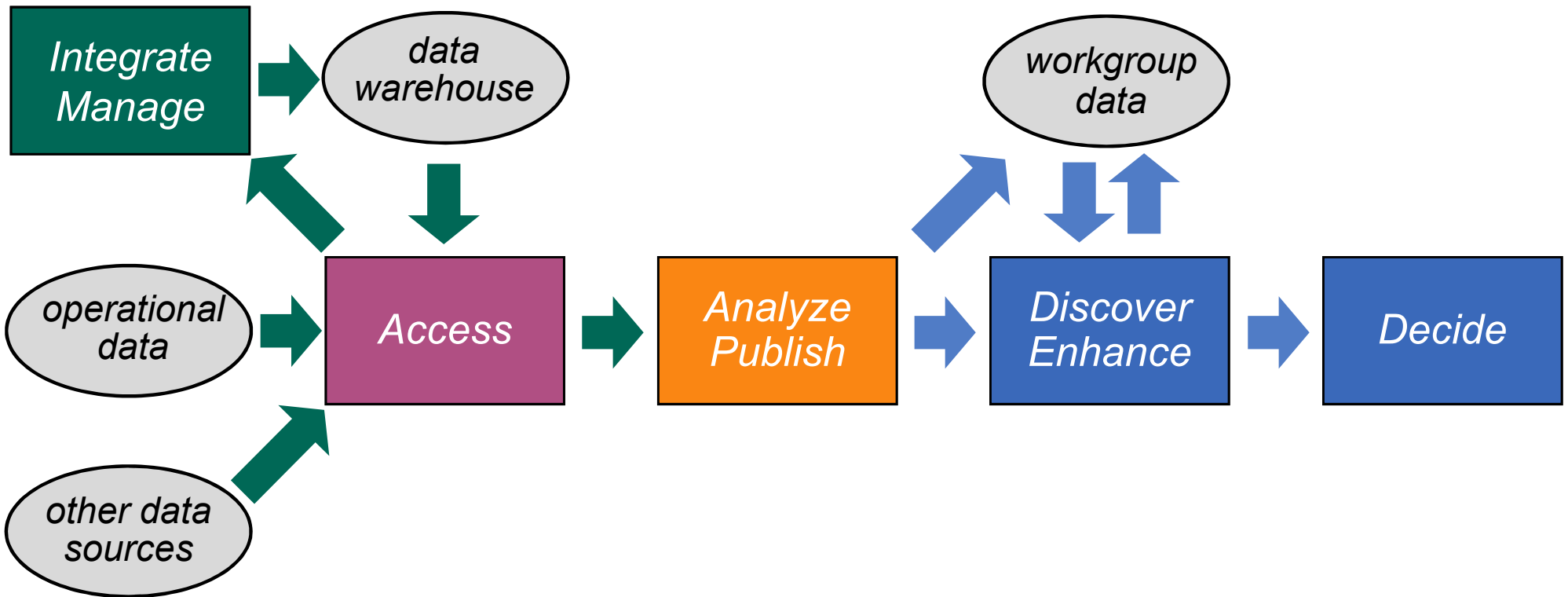
Information Worker Requirements

➔ Technology Solutions for Self-Service BI

Getting Started



The Information Supply Chain*



* This and the following slides from Colin White of BI Research





IWs and the Information Supply Chain

*BI/DW
Builder*

*Information
Producer*

*BI/DW
Builder*

*Information
Producer*

*Information
Consumer*

*Information
Collaborator*

Access

*Integrate
Manage*

*Analyze
Publish*

*Discover
Enhance*

*Make it easy
to access data
(60%)*

*Make DW
solutions easy
& fast to deploy
(31%)*

*Make BI tools
easy to use
(78%)*

*Make BI results
easy to
consume &
enhance
(56%)*



Make BI Results Easy to Consume & Enhance

*BI/DW Builder
& Information
Producer*

*BI/DW
Builder*

*Information
Producer*

*Information
Consumer &
Collaborator*

Access

*Integrate
Manage*

*Analyze
Publish*

*Discover
Enhance*

Easy UI

office support (46%)
portal (31%)
mobile UI (26%)
adv. visualization (41%)
search (37%)
glossary (43%)
data lineage (32%)
BI automation (48%)

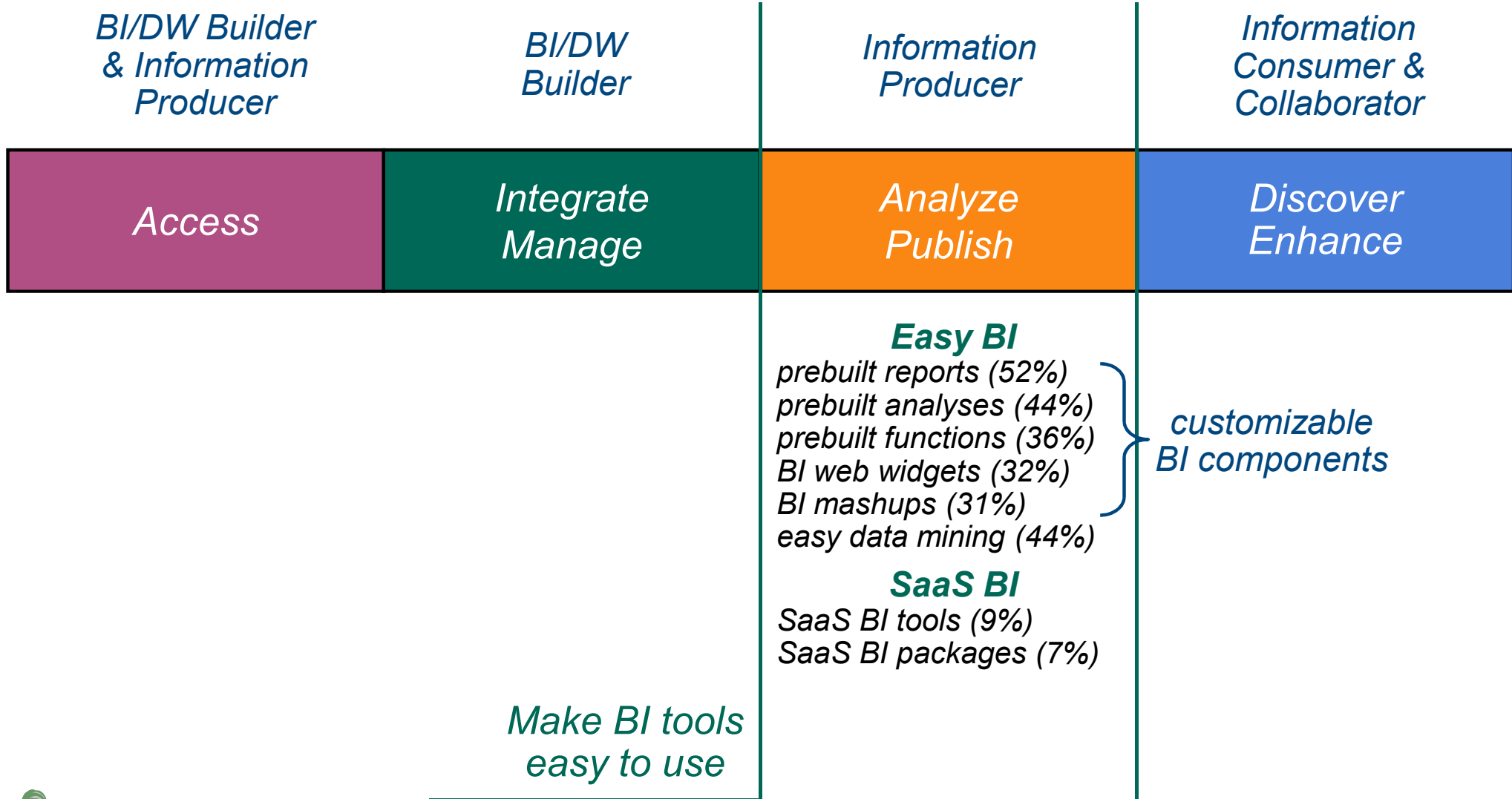
Collaborative UI

collaboration (38%)
usage tracking (33%)

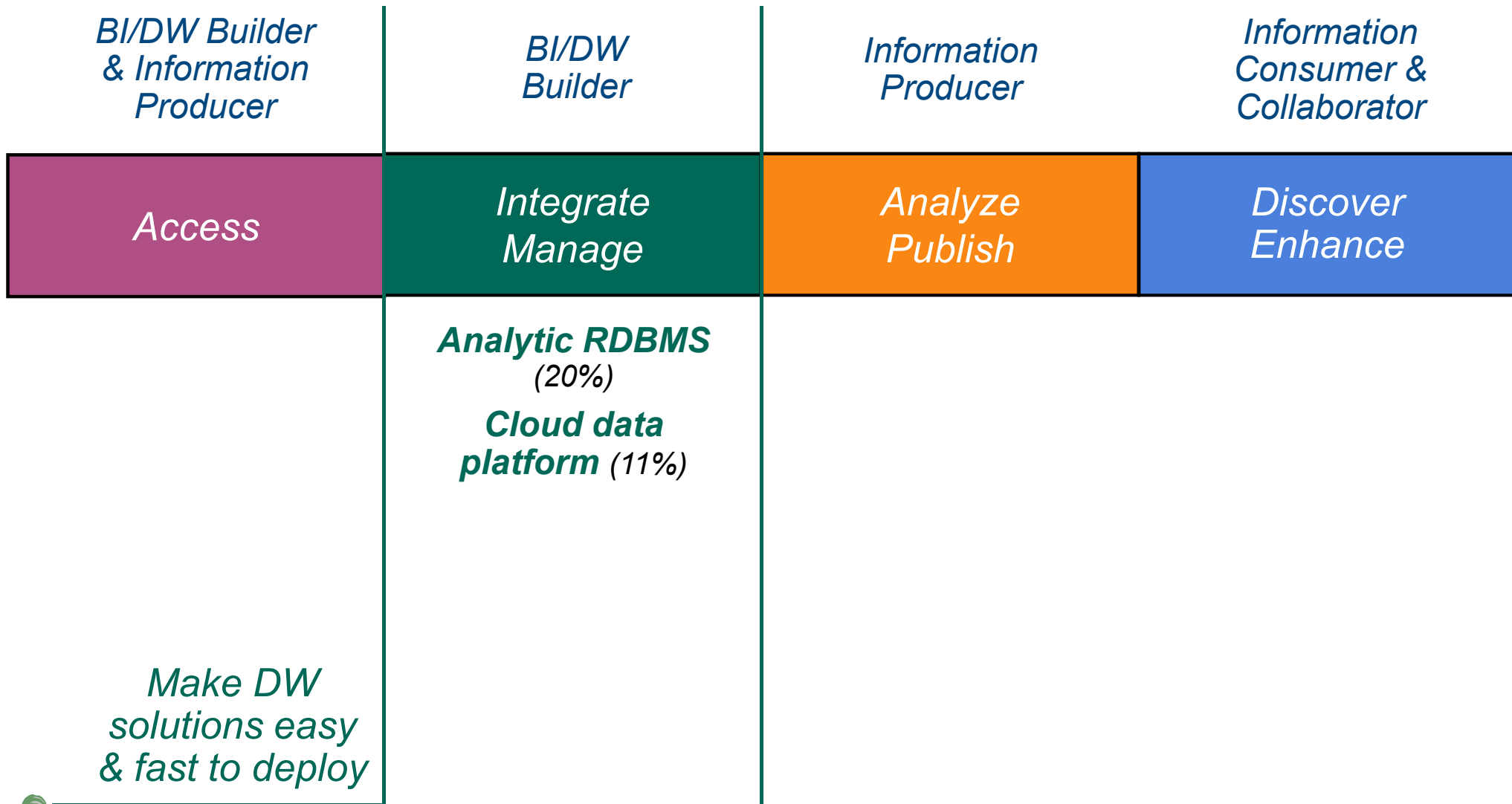
*Make BI results
easy to consume
& enhance*



Make BI Tools Easy to Use

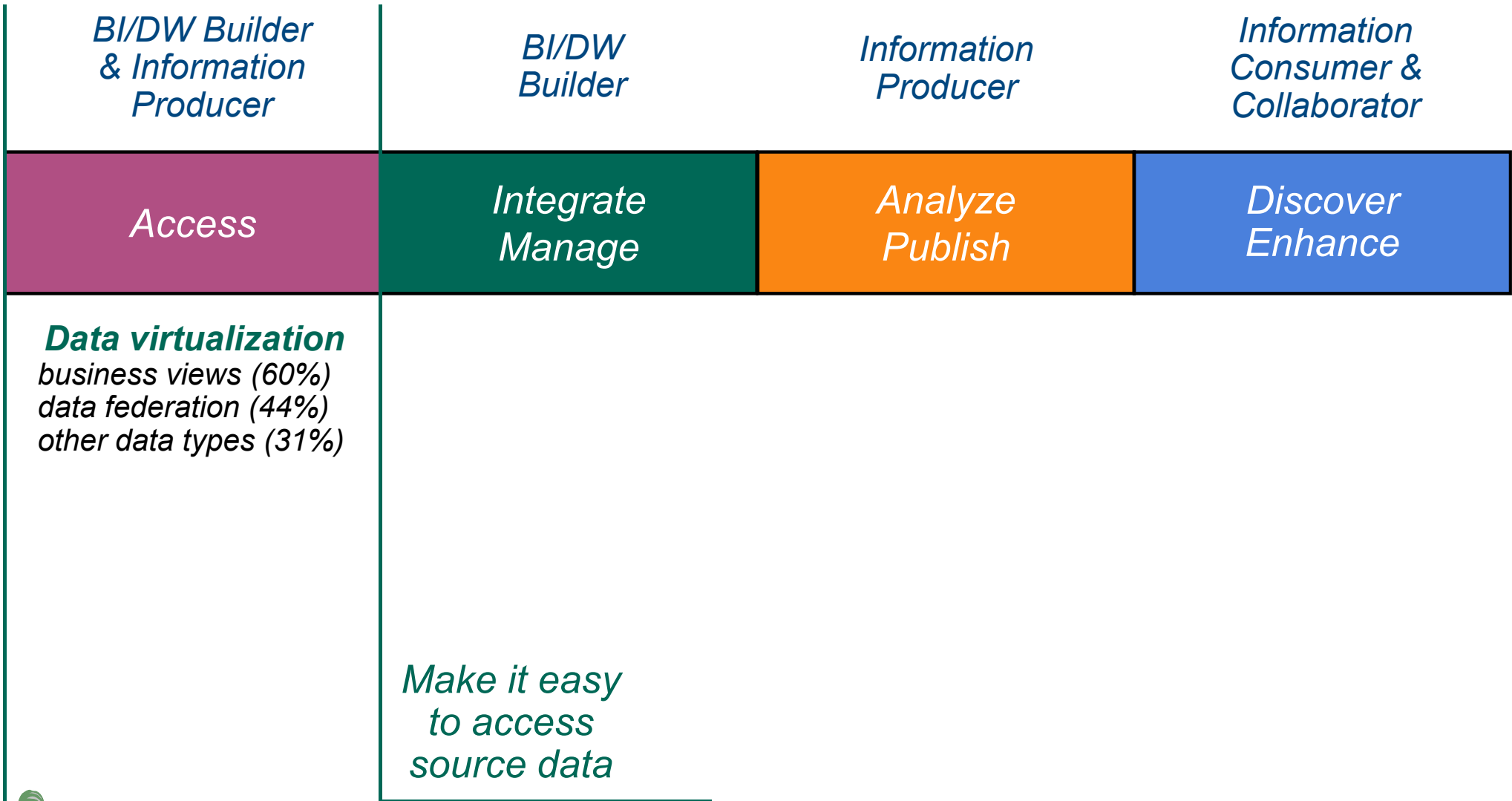


Make DW Fast to Deploy & Easy to Manage

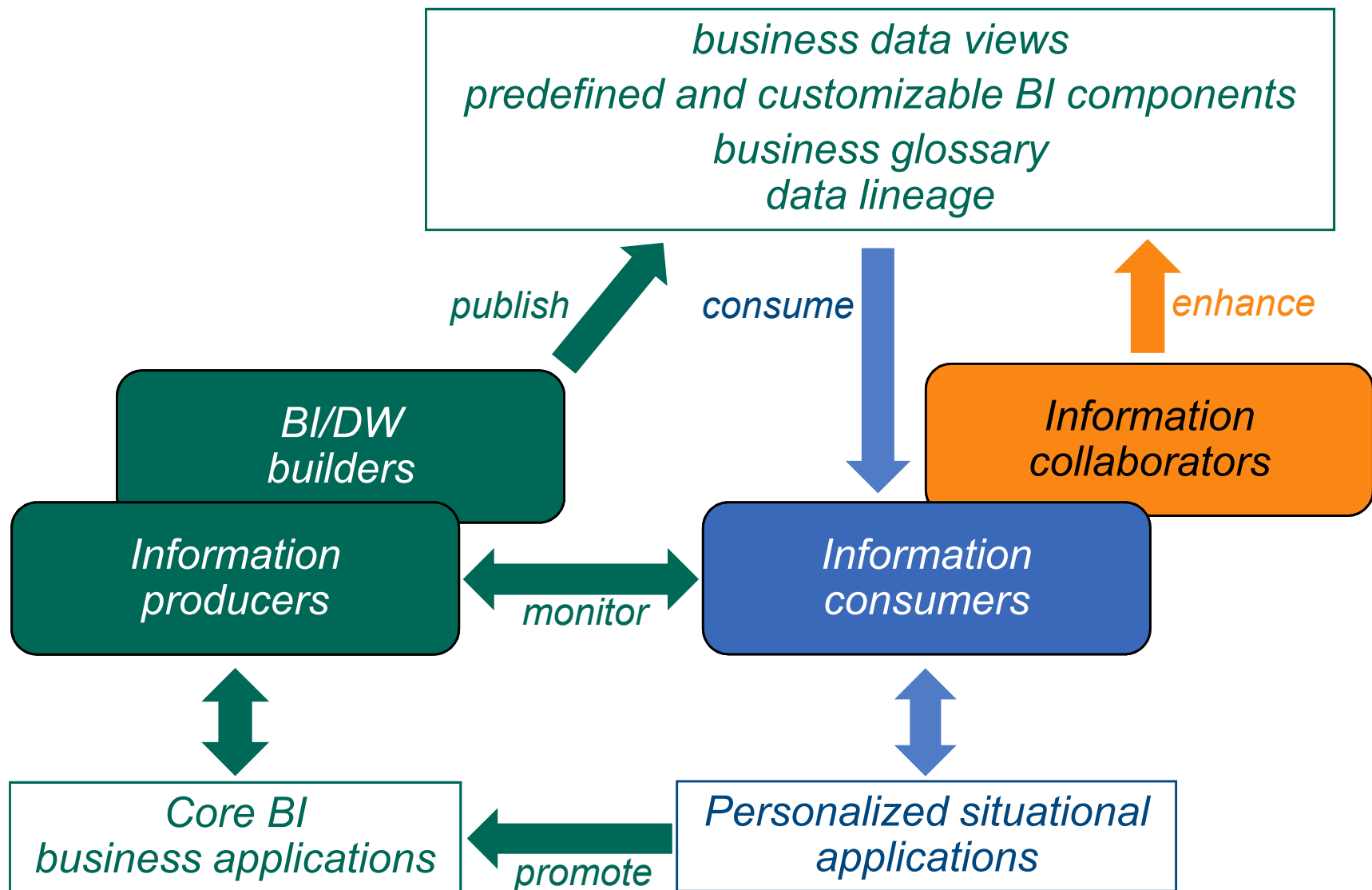




Make it Easy to Access Data



Putting the Pieces Together





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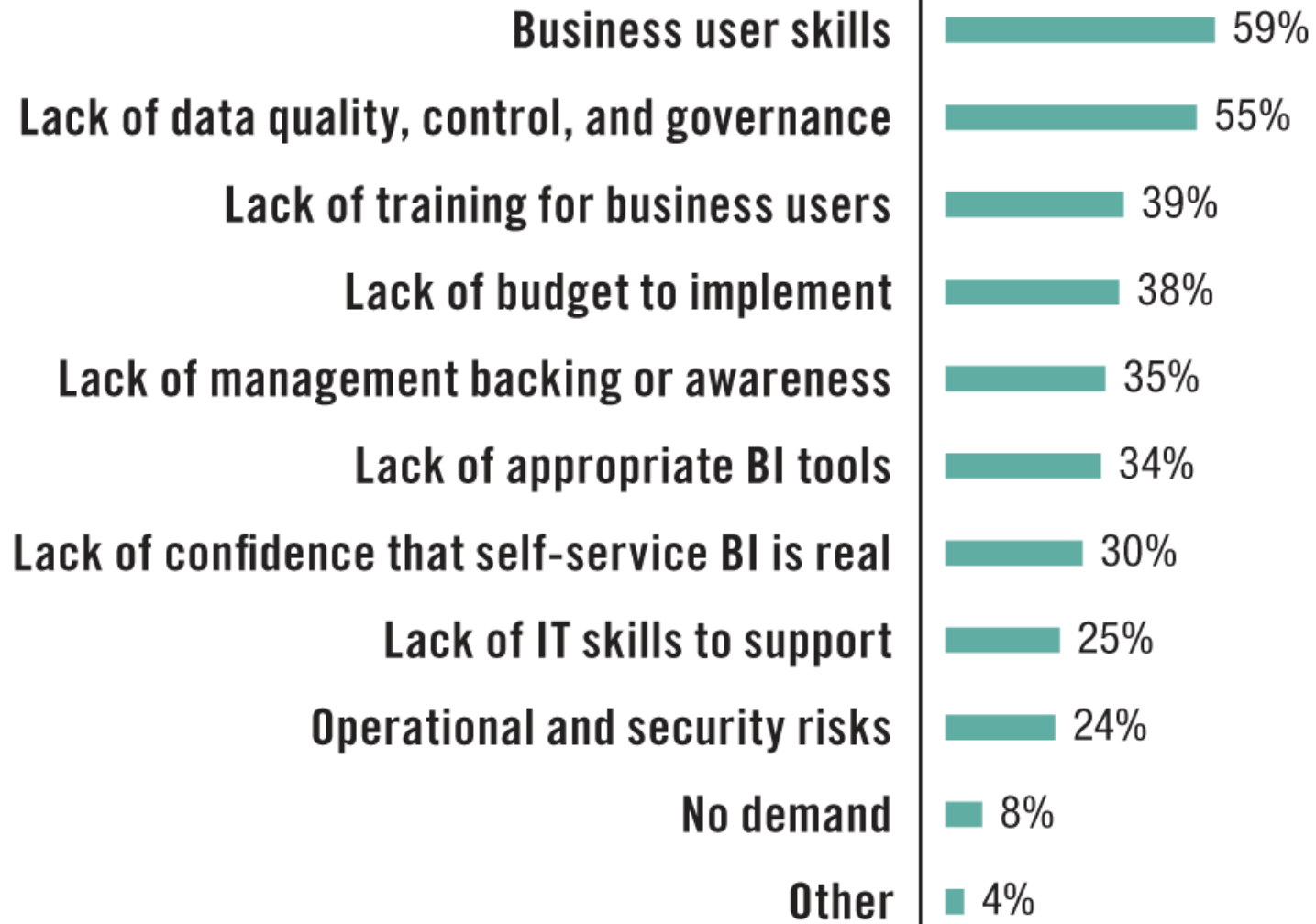
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TDWI Survey Results: Inhibitors to Self Service





Organizational Considerations

- Governance still has an important role
 - Determine whether data used is “governed” (e.g., in a data warehouse or MDM environment) or “ungoverned” (e.g., individual spreadsheets, external source)
 - Reuse of prebuilt BI components
- IT must have monitoring and oversight capability
 - BI/DW builder needs to administer and manage infrastructure
 - Must be able to monitor the environment
 - Must have oversight into the environment
- Note: LOB IT or experienced information producers may have to take on some of previously traditional central IT roles
 - Security of data, adherence to privacy policies





Governance Aided By Customizable BI Components

Parameterized reports that can be tailored to change the data content of the report contents, but not its layout

Report templates that can be tailored to change report contents and layout

Stored analyses for reuse by other users

Stored analytic models that are used at runtime to produce predictive analytics

Dashboard analytics that can be customized and manipulated by users

Web widgets are small applications that can be installed and executed within a web page by a user

Mashups that blend and analyze data from multiple sources and present the results using a web widget

Analytic functions that provide sophisticated analytic capabilities for use in BI analyses





Best Practices for DIY BI - 1

1. Don't assume that simply installing easy-to-use BI tools will make your environment self-service BI enabled
 - It is a start, but it is not that simple: the SS-BI infrastructure requires planning and design – ETL/data quality processing, data views, scalable databases, etc.
 - Requires an understanding of the types of data needed by information workers
 - Bottom line – your job is to make functions look easy and appealing
2. IT needs to monitor BI self-service
 - There needs to be a layer of administration and manageability
 - Give IT insight and oversight when information workers deploy, share, and collaborate using BI capabilities, plus the ability to secure, validate and audit environment





Best Practices for DIY BI - 2

3. Support collaborative business intelligence

- Enable different types of information workers to share BI results and work together to define new ways to view and analyze data
- Use technology that information workers can understand and use easily – mimics something familiar (Microsoft Office, for example)
- Use technology that meshes with your BI environment

4. Do not give information workers too much responsibility

- Most information workers really do not want entire responsibility for generating information and reports – It is NOT part of their job
- Make sure those who do perform self-service BI define key metrics, entities, hierarchies, and terms in a consistent fashion
- Strike a balance between self-service & IT-generated information





Best Practices for DIY BI - 3

5. Understand the information requirements of information workers and provide appropriate tools/reports/dashboards

- Understand what each group of information workers wants to accomplish with BI – motivations, skill sets, interests in SS BI
- You may find most information users are consumers with little interest in creating or generating own reports/queries, etc.
- But be aware that information workers change roles frequently

6. Create a starter set of standard BI components

- Make these customizable – these can replace 100's of hard-coded, customized reports and analyses
- Makes the consumer feel like they really are self-sufficient





Best Practices for DIY BI - 4

7. Establish a Governance Committee

- Determine requirements to create library of standard BI components
- Consists of representatives from both the information worker population and IT professionals

8. Allow the DW system to be used with other types of source data

- Where, for example, urgent business requirements cannot be satisfied using the data warehouse in a timely manner
- May need to provide a *monitoring* mechanism to manage this
- If data can subsequently be sourced by the data warehouse, it can then, if required, be incorporated into that environment
- The data governance committee should be involved in this process





Best Practices for DIY BI - 5

9. Buffer less experienced information workers from the complexities of the BI environment

- Use features such as web browsers, interactive graphics, wizards, drop-down lists, prompts that guide through BI tasks
- Adds to the flexibility of the overall BI environment
- But beware – self-service BI is more than easy-to-use BI tools – what’s intuitive to a professional may not be intuitive to a naïve user

10. Watch your costs!

- If you already have a BI vendor’s platform in place, you can often add a self-service capability with minimal effort and cost
- Many vendors offer entry level products geared toward companies with limited budgets





Conclusions

- Information volumes and complexity are increasing
- Many business users are unhappy with the tools they have for accessing and analyzing information
- Many business users lack confidence in the accuracy of the information delivered to them
- Business intelligence is used only by a fraction of the business users that could benefit from it
- We need to make BI products more usable and information more consumable
- Research and develop best practices to ensure your success in self-service BI





Further Reading

