Data Quality Protocol Background Information

July 2006

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GS1 and GDSN Organization

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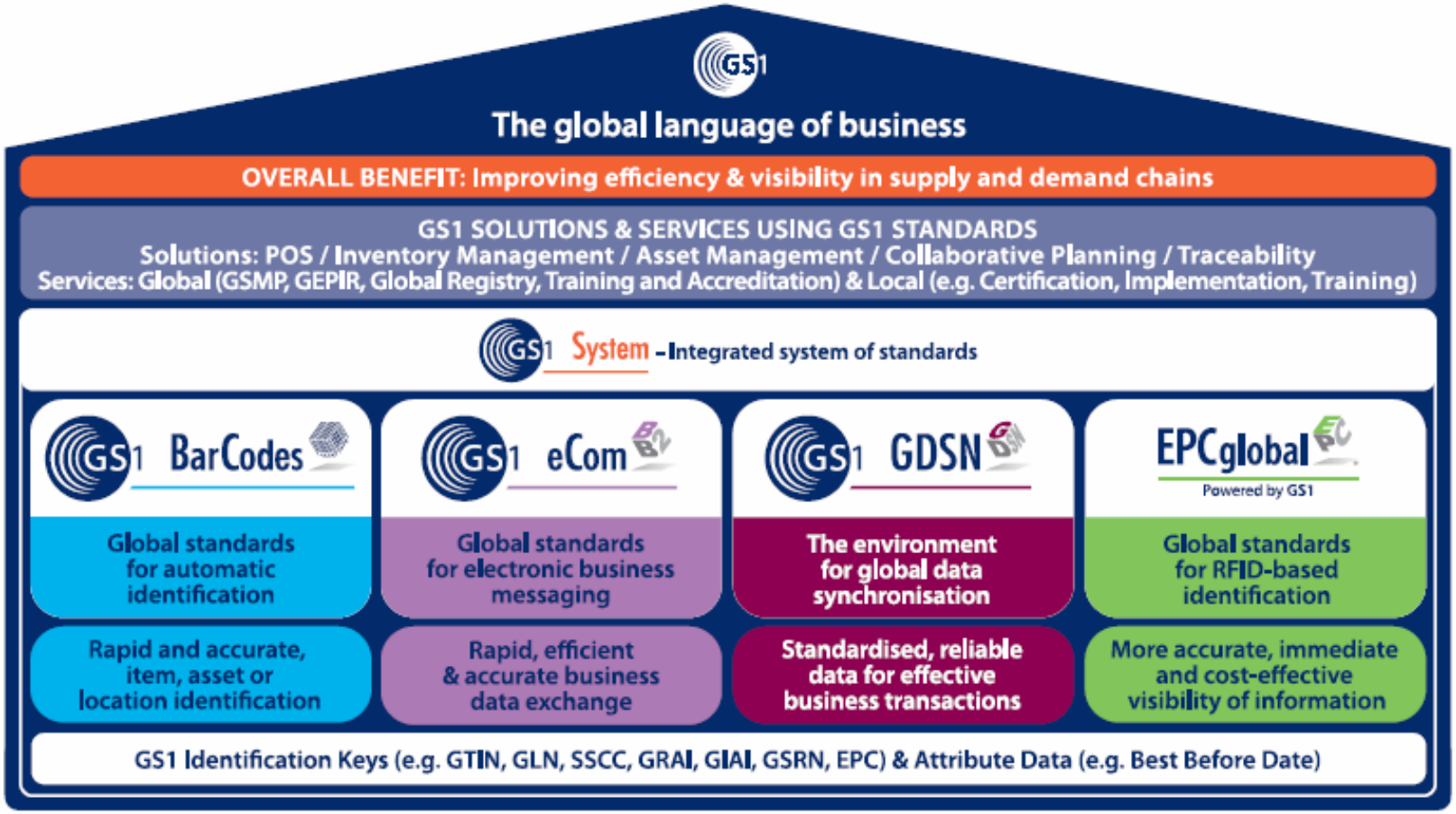
GS1 and the Business Units

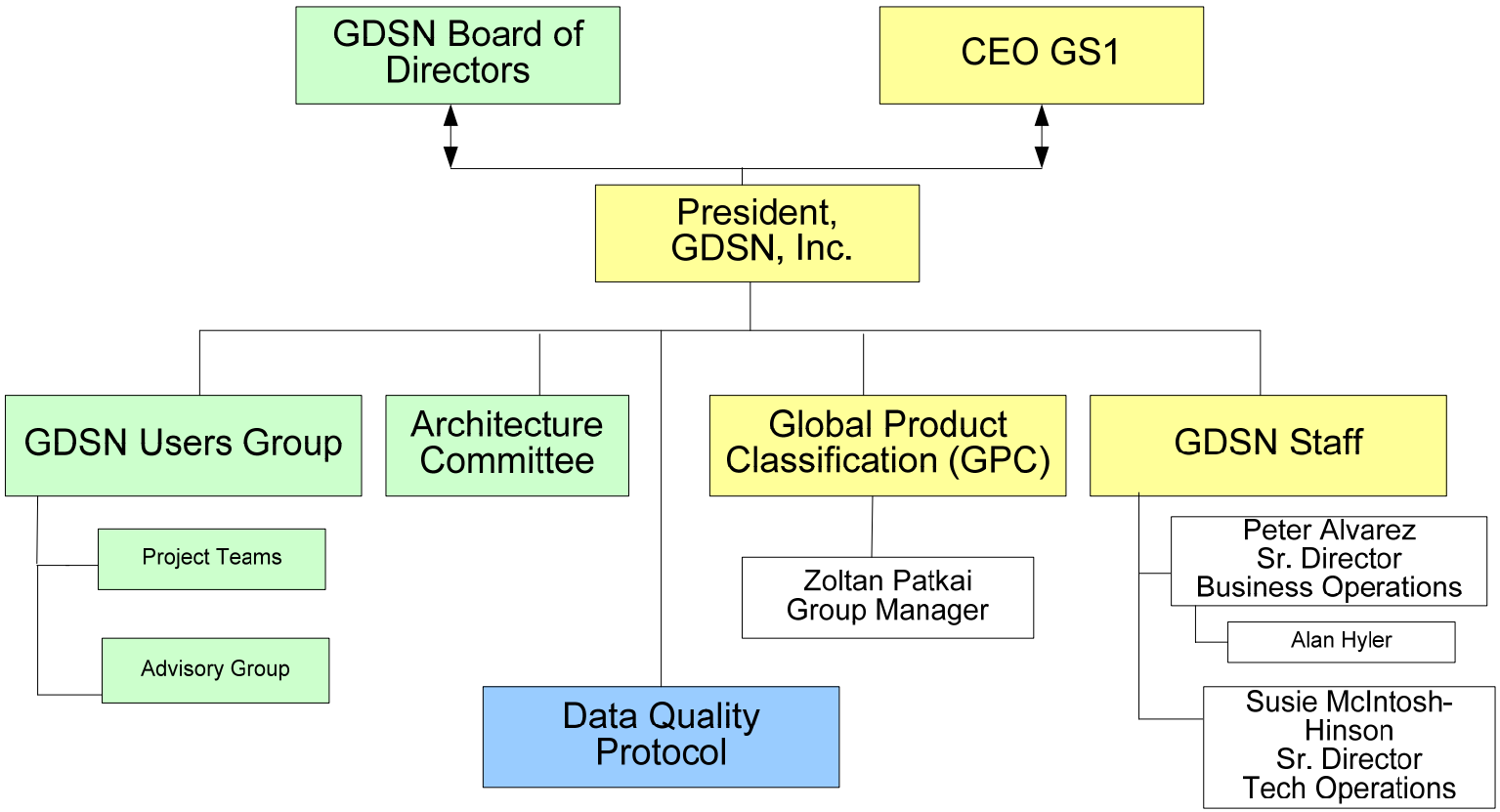


GDSN Within GS1

Board of Directors

Ahold
Nestlé
Unilever
GS1 Australia Colombia France Germany US
groupecarrefour
P&G
WAL★MART
GXS
KRAFT
SMUCKER'S
Wegmans
METRO Group
TESCO
AGENTRICS

GDSN Inc. Organisation Chart



Data Quality Within the Global Data Synchronization Network

Background

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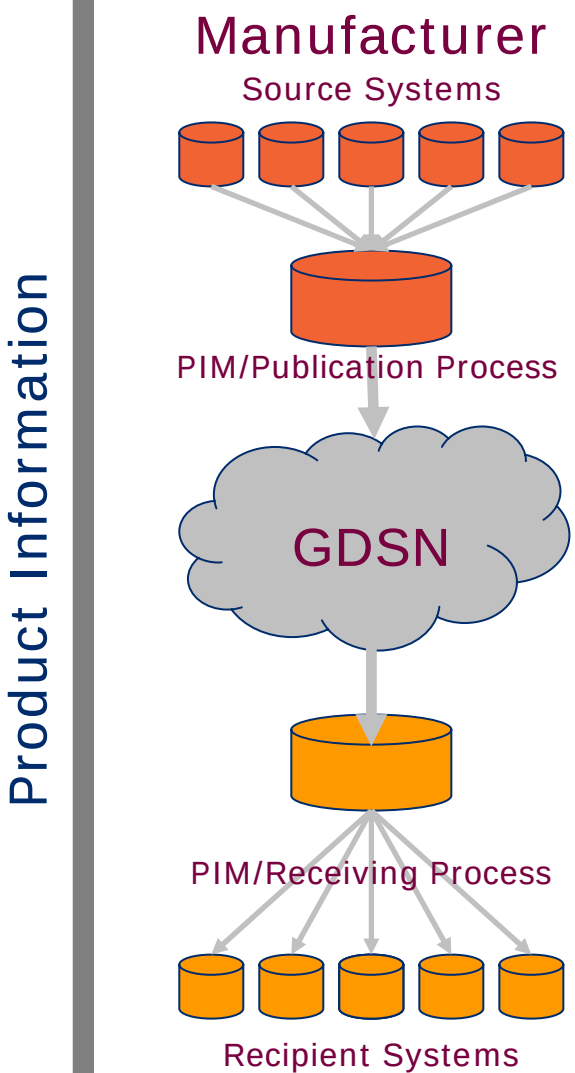
The 5 Dimensions of Data Quality*



Completeness	Required values electronically recorded
Standards Based	Data conforms to industry standards
Consistency	Data values aligned across systems
Accuracy	Data values are right, at the right time
Time Stamped	Validity timeframe of data is clear

***Source:* GCI / Cap Gemini Internal Data Alignment Report, May 2004**

Data Quality is Critically Important for…

- Logistics Systems
- Warehouse Management Systems
- Planogram Management
- Outbound Shipping Efficiency
- Efficient New Item Introduction
- Efficient Financial Processes
- Improved Customer Service
- The Realization of Data Synchronization Savings!

Realizing Benefits Requires…

To realize the full potential of the GDSN, Trading Partners must ensure the following:

- Accurate product information is aligned across internal manufacturer systems
- Accurate product information is synchronized through the GDSN
- Product information within retailer systems is aligned with product information received via the GDSN

The industry must trust the quality of data flowing through the GDSN …

An Industry Call to Action …

- In late 2004 / early 2005, a number of different industry and country-specific work groups were independently formed to address the data quality issue

- However, the work groups encountered the risk of creating multiple solutions

- As a result, in April 2005, the GCI Executive Board recommended the creation of a Joint Business Planning Data Accuracy Task Force

Joint Business Planning Team Formed

P&G / Gillette
Campbell's
Unilever
SCA
Kraft
General Mills

Wegmans
Tesco
Carrefour
Royal Ahold

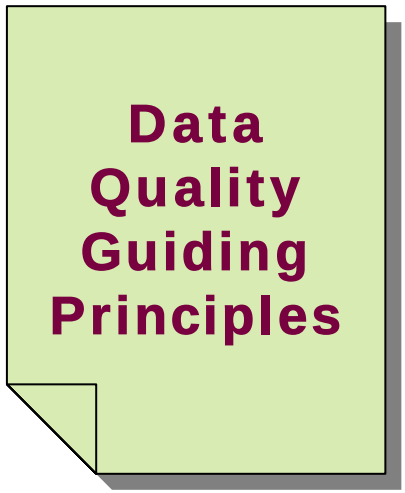
AIM
GMA
GCI
FMI
CIES
ECR Europe
GS1

… with the charter to develop a framework for a global data quality solution

Achievements

- Created Data Quality Framework, including:
  - Data Quality Guiding Principles
  - Data Quality Protocol (for industry review)
    - Data Quality Management System (DQMS)
    - Data Inspection Procedure
- Aligned with, or considered, other industry initiatives
  - Measurement Tolerances Data Accuracy GSMP Project Team
  - Internal Data Alignment (IDA) methodologies
- Agreed an industry governance model and transition and hand-off process

Achievements:
Data Quality Guiding Principles



- A set of key principles upon which the Data Quality Framework and Protocol are based
- Adhere to the guiding principles as the Protocol evolves over time

GS1 (GDSN)– Data Quality Framework Owner

Stewardship / Certification Oversight / Continuous Improvement

Steering Group: Support Framework Owner

Accreditation Body

Accredited Service Providers

Data Quality Protocol

Service Providers

Trading Partners

Legend

- Certification via accredited entity
- Compliance to protocol via non-accredited entity
- Compliance to protocol

Achievements:
Work Groups Drafted Data Quality Protocol

I. **Inspection Procedure Working Group** – to define the requirements for physical inspection of key logistics attributes
   - Near-term, “get started” solution

II. **Data Quality Management System Working Group** – to define the requirements for an ‘ISO type’ data quality management system
   - Based on internal processes, procedures and common performance criteria
   - To include appropriate accreditation /certification / validation processes
     - Medium- to longer-term solution (Inspection Protocol to merge into this work)

* Lloyds Register Quality Assurance joined on a pro bono basis and provided subject matter expertise to the work group documents

Quarter 1 2006

Industry Review Period For Data Accuracy Protocol

- Trade organisations sent documents to, and collect comments from, members through January 2006
- Comments posted on GCI workspace by the organisations
- GDSN Inc. sent review package to GDSN certified data pools
- Target industry review period ended April 2006

Quarter 2 2006

Industry Handover of Framework

- JBP team disbanded at the end of the industry review process
- JBP governance handover to GS1 GDSN in June 2006
- GS1 GDSN establishes Steering Committee

Steering Committee Members

Manufacturers:

- Nigel Bagley - Unilever
- Sue Mackasey - Kraft Foods
- Terry Mochar - Reckitt Benckiser
- Lionel Tussau - Georgia Pacific

Retailers:

- Bruce Hawkins - Wal*Mart
- Ruud van der Pluijm - Ahold
- Marianne Timmons - Wegmans

GS1 Member Organisations:

- Hein Gorter de Vries - GS1 Netherlands
- Richard Jones - GS1 Australia
- Gabriel Sobrino Medina - GS1 Mexico
- Mary Wilson - GS1 US

Data Quality Within the GDSN

Definitions
How It All Fits Together

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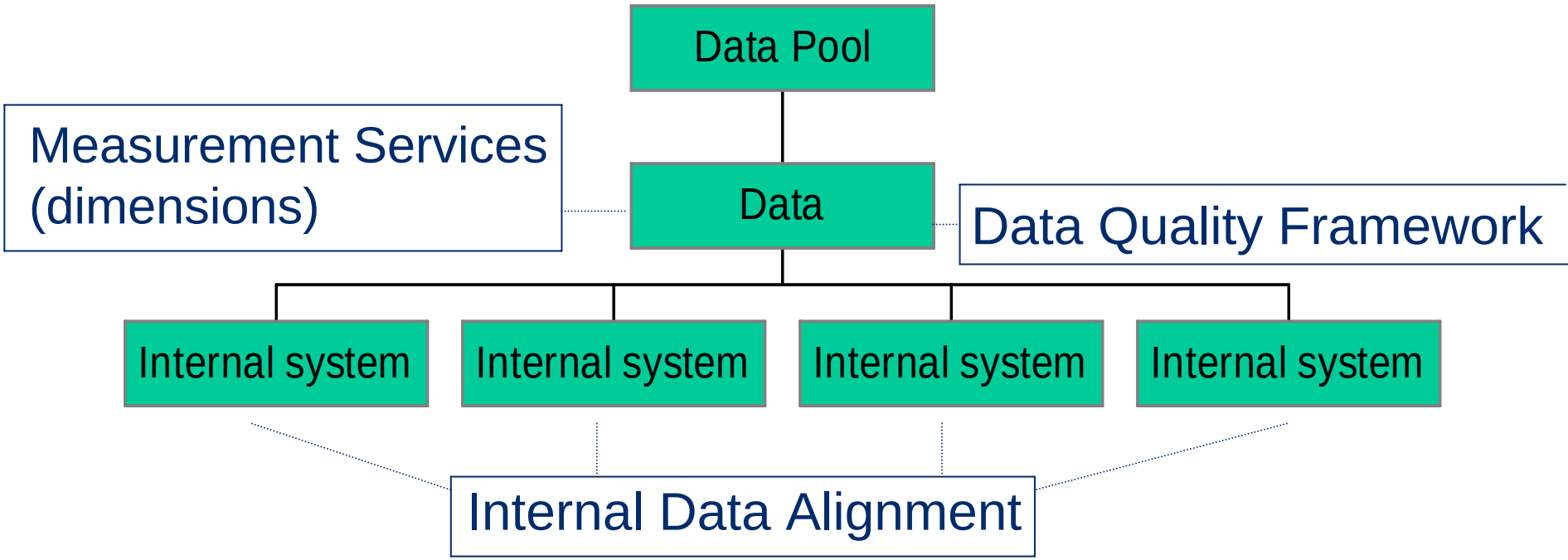
Data Quality



Definitions

Data Quality:

- The desirable characteristics of data as published in GDSN data pools and trading partner systems
- Complete, standards based, consistent, accurate and time stamped

Data Quality Framework:

- Best practices for the management of data quality systems
- Depending on market needs, compliance can be demonstrated through:
  - Self-declaration
  - Third party certification based on inspection and auditing

Definitions (Continued)

Internal Data Alignment (IDA):

- Internal management of data across various business systems to achieve data quality
- One aspect of achieving data quality

Measurement Services:

- External measurement service to help businesses publish accurate dimensional data
- Offered by several GS1 Member Organizations and Data Pools
- Voluntary or mandatory based on market agreement

Data Quality Within the GDSN

The Data Quality Framework In More Detail

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Guiding Principles

- Based on user needs
- Strongly encouraged, yet voluntary
- Based on the requirements of a given trading partner relationship
- Comprehensive, yet flexible
  - Can be included in any kind of quality management system
- Minimizes implementation costs – enabling benefits
- Complementary to GS1 System standards
- Open to certification **and** self-declaration

Data Quality Protocol

Two sections:

1. **Data Quality Management Systems Requirements**, including chapters on:
   - Self-declaration
   - Certification
   - A management system like ISO 9000, aimed at the proper management of data

2. **Data Inspection Procedure**
   - A procedure for the physical inspection of products and data
     - Stand alone, *or*
     - Part of a Data Quality Management Systems audit

Best practice procedures regarding how to manage data

- Establishing a Data Management Policy
  - Setting objectives
  - Defining responsibilities
  - Providing resources
- Establishing the work processes
- Establishing a database infrastructure
- Establishing an IT infrastructure
- Internal communications

Data Quality Management Systems Requirements (Chapter 3 of the Framework) II

Operational controls:

- Data generation and verification
- Product measurement
- Data input
- Data publishing

- Measuring and monitoring
- Processing user feedback
- Establishing preventive action
- Establishing corrective action

Closing the circle:

- Internal audits
- Management review
- Continuous improvement

Data Quality Management Systems
Compliance assessment

Based on a given trading relationship, there may be a need to confirm compliance to the Data Quality Management System Requirements. This can be achieved through:

- Self-declaration (Chapter 4 of the Framework, under development)
- Third party auditing (Chapter 5)
  - Chapter 5 provides requirements for the third party auditors

Inspection procedure (Chapter 6)

- Comparison of a sample size of actual product against related data

- Limited to key attributes:
  - Global Trade Item Number
  - Classification Category Code (yes or no)
  - Trade Item Description (for information purposes only)
  - Dimensions
  - Content and weight
  - Pallet configuration

- Procedure(s) to be used:
  - Internally (self-declaration)
  - Third party auditor

Data Quality Within the GDSN

Benefits

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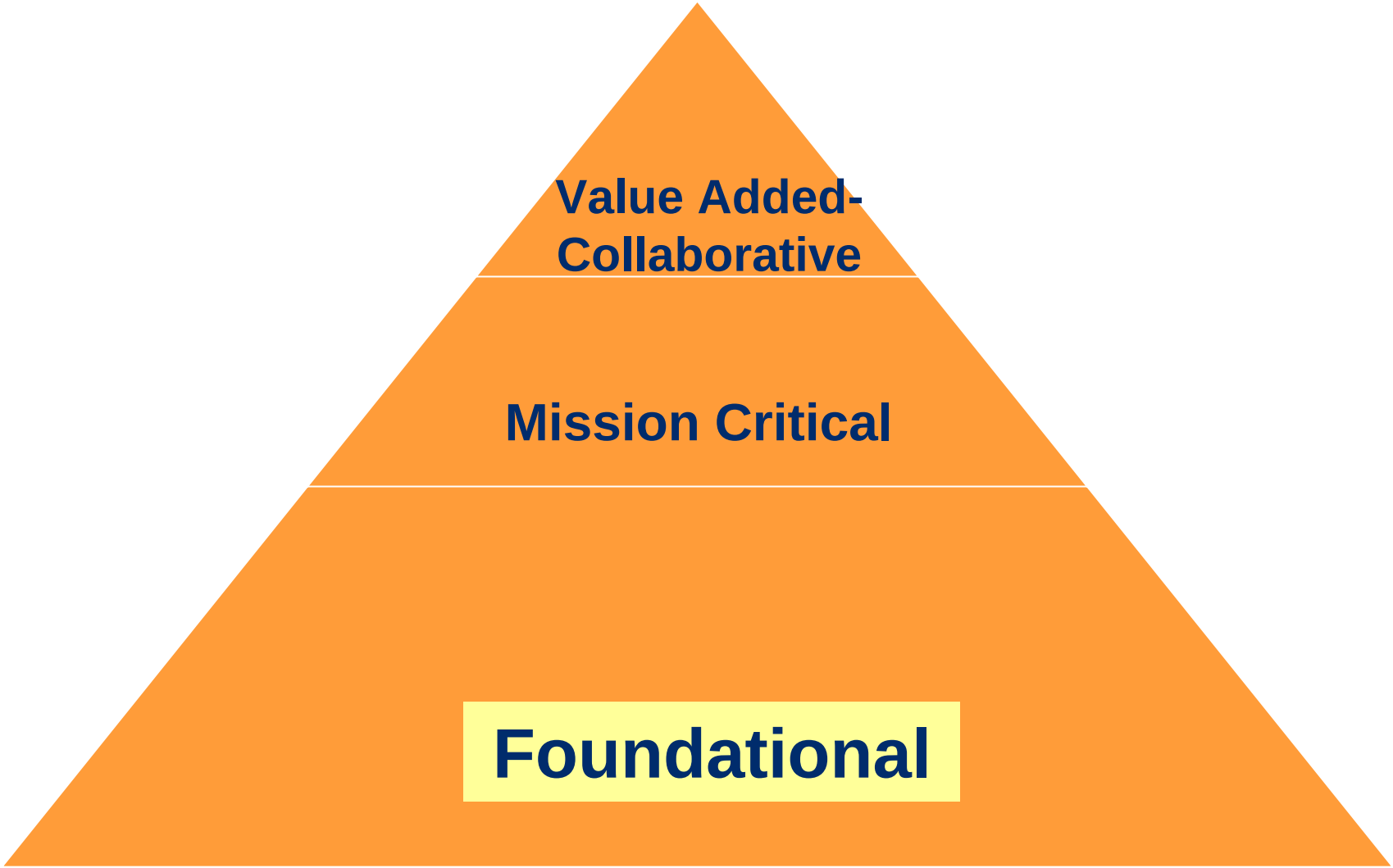
Data Quality

- Data Quality is foundational to the Global Data Synchronisation benefits
- Data Quality is an achievable goal, some companies are succeeding already and reaping benefits
- **This is an industry problem, it requires an collaborative industry solution…**

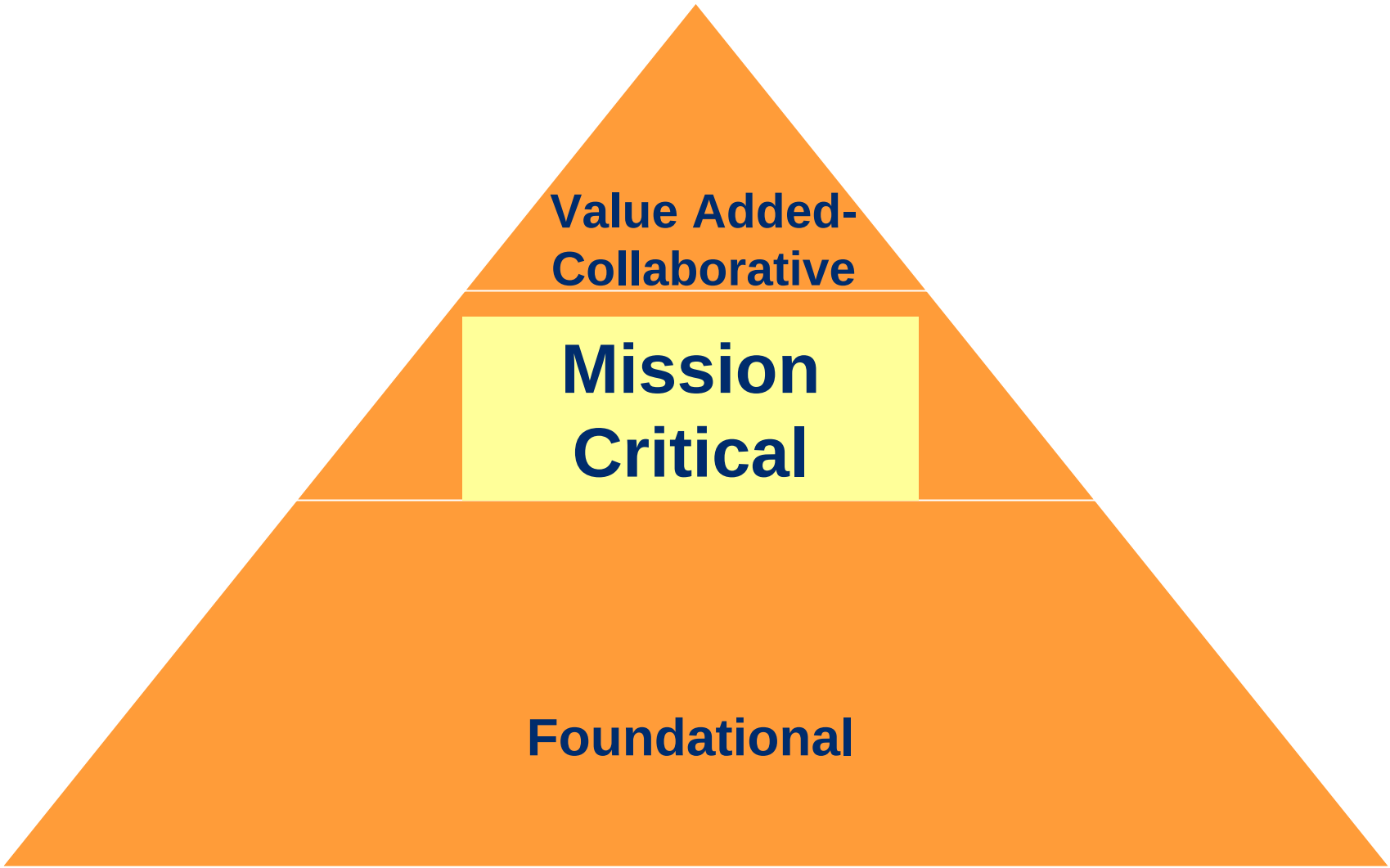
Data Quality Is Foundational

Without good, accurate data, Global Data Synchronisation will only enable the rapid, seamless transfer of bad data!

Traditionally, Value of Synchronisation Was Thought to be Foundational



Synchronisation is Foundational, But the True Benefits Are Realized in the Mission Critical Projects it Enables



Accurate Data Synchronization Benefits at Wegmans

- **Transportation Savings: $3.5 million dollars annually**
- **Coupon Family Code Synchronization: Reduced 454,000 (40%) instances of front end coupon scanning customer rejections**
- **New Item Introduction: Improved speed to shelf**
- **Distribution Network: $1 million in labor and inventory carrying costs**

And there is much more…

Suppliers Are Finding Significant Benefits, Too!

Transportation Savings:

- One company corrected a weight error on a top selling item and saved $2.5 million in transportation costs for one product line – with a potential to save an additional $1.5-3 million for additional product lines

New Item Introduction:

- One company improved the speed to shelf of new products from 4-8 weeks to 2 weeks
- Another company increased the number of new items introduced in one year by 50%, yet did not require additional headcount

Order Administration:

- One company will increase administrative productivity by 59,000 hours annually by reducing inspection time of each order by just 5 minutes

Distribution Network:

- One company improved information transfer through its distribution network from 5-6 days to 2 days

And there is more!

Key Lessons Learned From The Accenture Study

There is value in accurate data synchronization

- Elimination of Supply Chain disruption and waste

It is about our people interacting differently in a new world

- More collaborative focus on improving customer satisfaction and sales

The “Best Suppliers” are learning, leading, and realizing the greatest benefits in this new environment

For more information:

http://www.gs1.org/dataquality

Email support: dataqualityinfo@gs1.org

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