

Content Form Patterns

The Content Form Patterns describes a structures and rules driven approach to managing all the forms of data present with a multi-faceted enterprise data environment and mapping between the different forms.

Adrian Miley
(Adrian.miley@mileywatts.com)

What are the problems with managing Enterprise Data?

- Not knowing the “full picture” – knowledge is confined to data-silos fragmented across the enterprise
- Not knowing the impact of changing the definition of a data-item
- Not knowing exactly where a data-item is sourced from
- Not knowing where data is being used
- Not knowing if a data-item is defined consistently across the entire enterprise
- Not knowing what data rules are embedded in each data application
- Not knowing ...?

However...

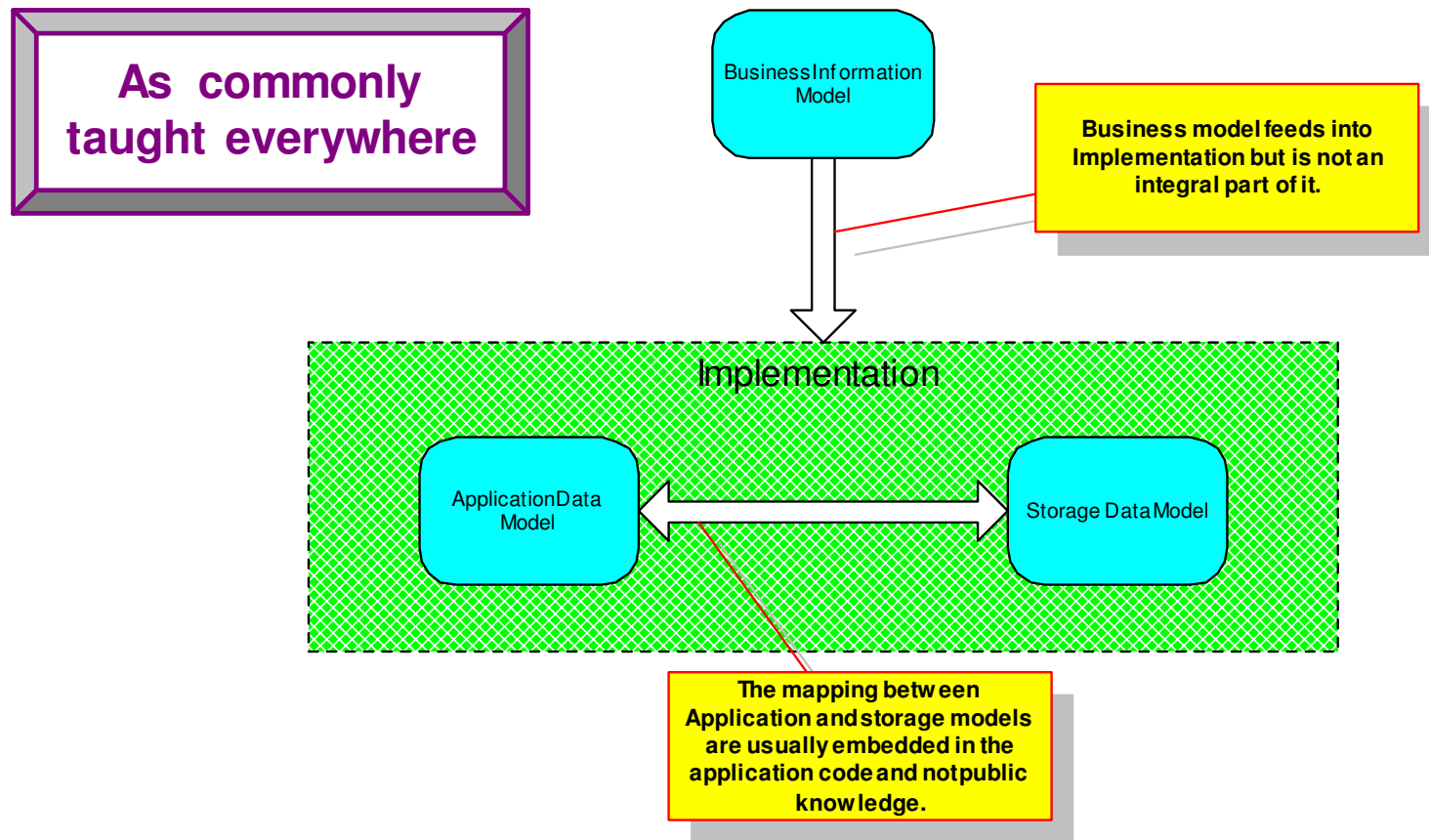
Your Data Will Outlive Your Applications

So eventually data knowledge will be lost

What Are Content Forms?

- The **Content Forms Framework** is an elaboration of the traditional 3-model view of the Data Content within an Organisation that provides an integrated of an organisations data content in all its forms.
- **Content Form** is about structure not (necessarily) encoding. It supports **Model Driven Generation** principles to allow derivation of an API from the relevant model.
- It supports dynamic message definitions so messages are defined at run-time rather than compiler–time.
- It describes the different forms of data and how they relate to each other and the data flows through the organisation.
- It establishes principles for transforming from one form to another to allow for consistency and repeatability of transformation across boundaries.

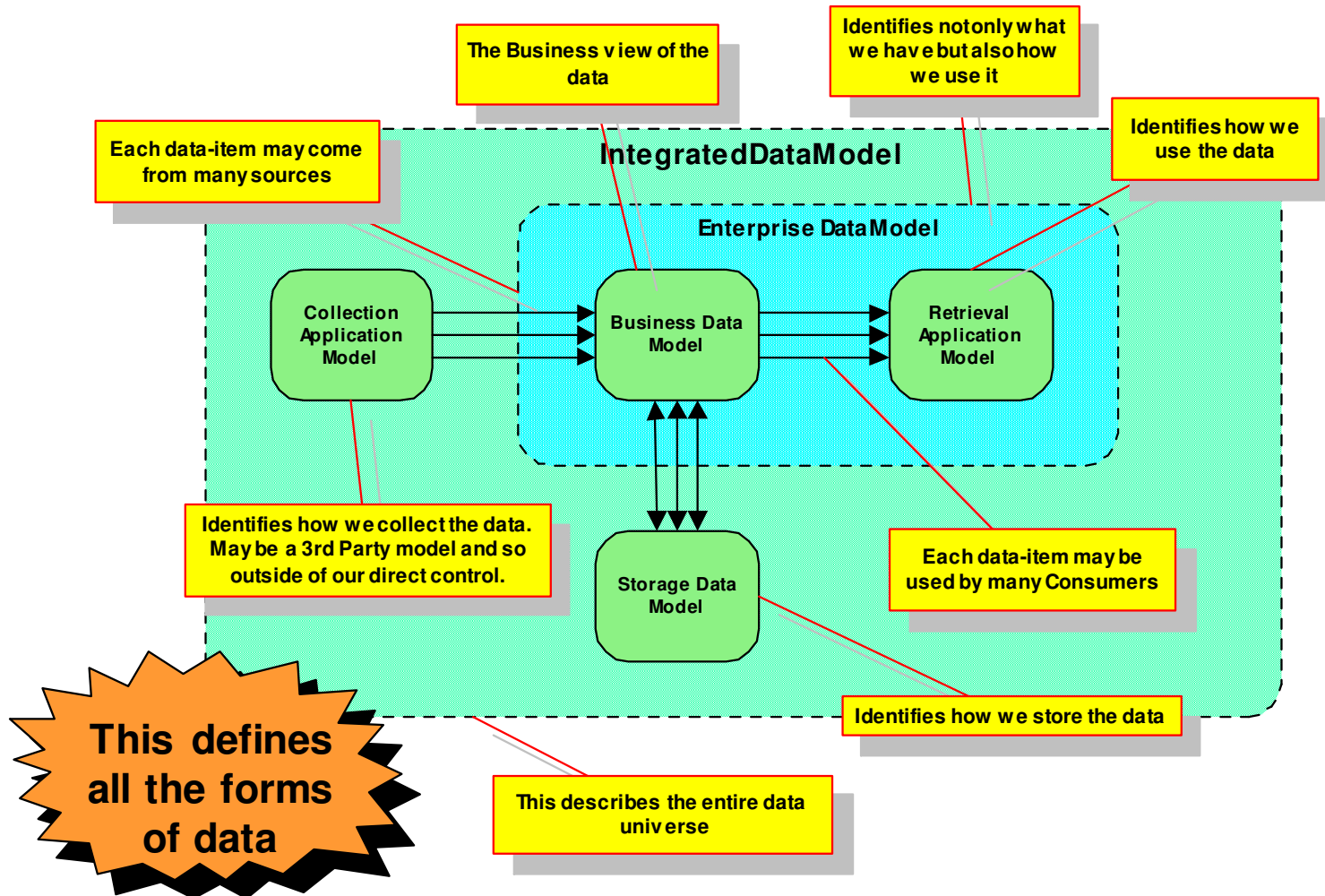
The problem is the three Model View



Three Model View – What's Wrong With It

- No guarantee of accuracy of Business Model – what is implemented may be different to what is modelled
- Doesn't scale to the Enterprise level where many applications only manipulate a small part of the total data-set
- Processing rules are embedded in applications and hidden from the business.
- Generally only works with 1:1 mapping between Application and Storage

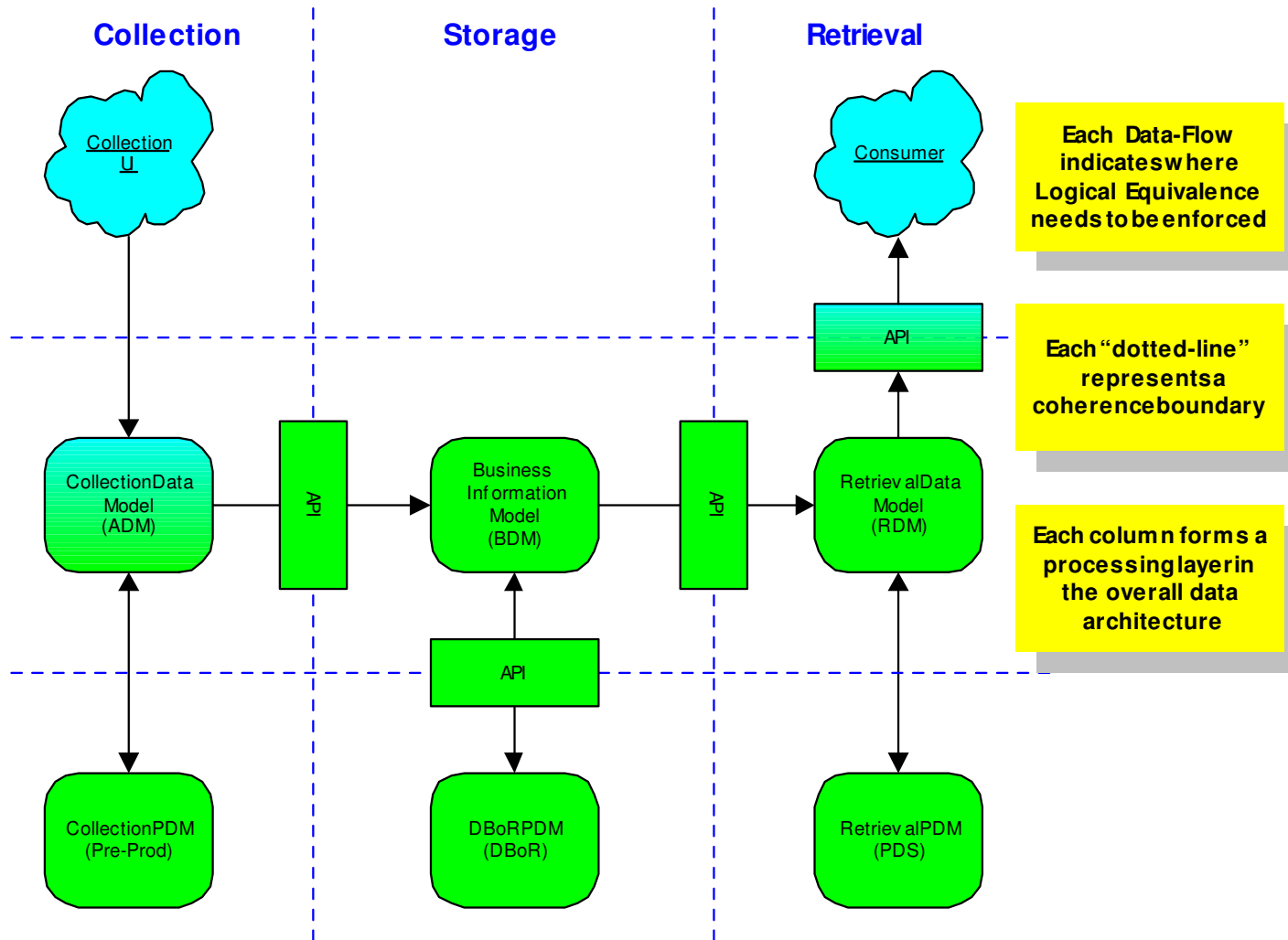
The answer is the Integrated Data Model



Defining The Content Forms

- **Business Data Model** describes the data using business terms and semantics. A **Business Entity** is the artefact within a **Business Information Model**.
- **Storage Model** describes the private representation of the data as it exists in persistent storage e.g. database. This is the **Storage Form**.
- **Collection Model** describes the structure of the data as it is received. Each feed may maintain only a fragment of a Business Entity. This is the **Collection Form**
- **Retrieval Model** describes the data as it is used by a consuming application. All Retrieval Forms are read-only views of the Business Entity they are based on. This is the **Retrieval Form**.
- The **Enterprise Data Model** combines the Business Information Model and the Retrieval Data Models to provide a view of what the data is and where it is used.
- All the models together form the **Integrated Data Model** that describes the entire corporate universe coherently.

Information Layers



Controlling Behaviour at the Boundaries

- All transformations must be Bi-Directional
- Each Information Layer only interacts with its immediate neighbour.

Summary

We have looked at...

- The problems with managing Enterprise Data
- The shortcomings of the 3-model view
- The benefits of an Integrated Data Model
- Defined key terms & concepts
- Established Principles of Integration
- Introduced the different layers of Information Architecture