



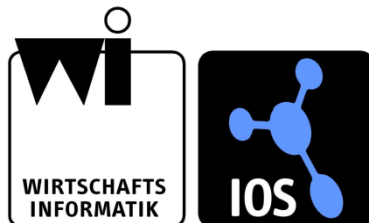
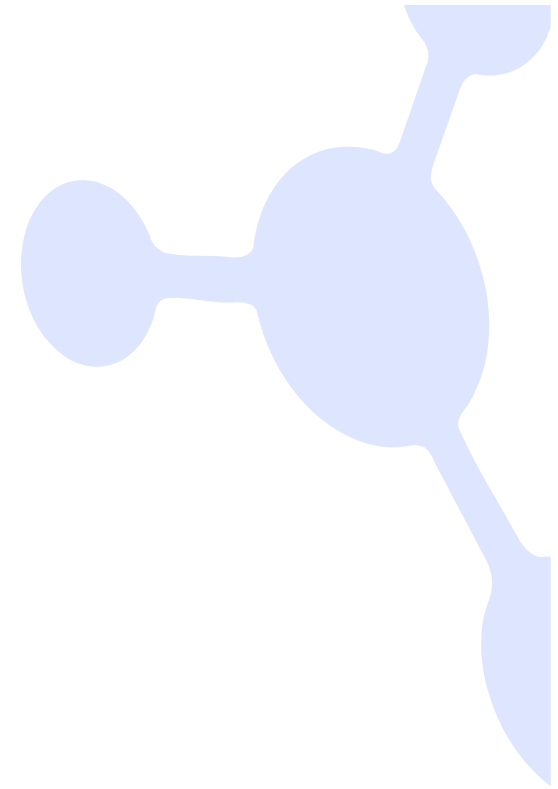
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Content management



In the news: Consumer reviews influence travel

- In a recent survey, Yahoo Travel found that 61% of people now go online for **vacation recommendations**. Travelers no longer just search for a hotel based on price; they are now mainly looking for user reviews, user ratings and photos.
- In the UK, new research by EyeforTravel has revealed that **User Generated Content (UGC)** now plays a remarkable role in the UK young professional's online travel buying cycle, with 72% saying that consumer reviews have influenced their travel choice. UGC is having a significant impact on their decision-making process when it comes to travel; 15.3% state they always use UGC for travel, and a lower 12% for non-travel products such as music. 63.8% occasionally use UGC in their buying cycle, so that's a sizeable 79.1% who have used consumer reviews for travel before
Source: <http://www.innkeepersonly.com>

In the news (cntd.)

UGC is proving to be a very powerful conversion tool as consumers are looking for reassurance to shift from the research to the purchase stage of the buying cycle. UGC is being used after the search is narrowed and therefore later in the research cycle.

29.7% of UK young professionals say consumer reviews are very influential when booking travel online, and 50.3% say they has a certain level of influence. Only 20% do not find them useful at all.

TripAdvisor is by far the favourite UGC site and also up there as one of the most popular travel sites in general. "What do people actually look for in consumer reviews? EyeforTravel revealed that most people look for positive reviews rather than negative ones and state that this is clearly where their focus is. Following this, people are looking for detail, particularly information that is not available in official reviews. They are looking for honesty, mixed reviews, a good balance of positive and negative comments from which they make their own judgment, rather than take it exactly for what it is. They look for quantity, suggesting sites with low volumes of UGC won't be taken seriously. They want true insight, experience and knowledge, and they value consumer ratings." Source: <http://www.innkeepersonly.com>

Learning goals

- Understand specifics of information products
- Reflect the role of standardization in tourism
- Assess the model of content syndication

Agenda

- | |
|--------------------------------------|
| 1. The concepts of information goods |
| 2. Tourism as information good |
| 3. Content targeting |

Information goods

Two aspects of information goods deserve special attention:

- they are digital goods and
- as economic goods have special properties.

Typical examples which illustrate the heterogeneity of information good are

- news (e. g. financial news),
- education (e.g. Computer Based Training),
- software.

Properties of information goods

Cost structure

- **First copy costs, often sunk costs**
- **Marginal cost of distribution close to zero**

Heterogeneity of supply

- **Horizontally differentiated and fragmented product markets**

Information asymmetries

- **Experience goods, information paradox**

Frequency of transactions

- **Similar information goods are often regularly consumed (daily news, periodicals, software updates)**

Price elasticity of demand

- **Intra and inter-sectoral substitution**

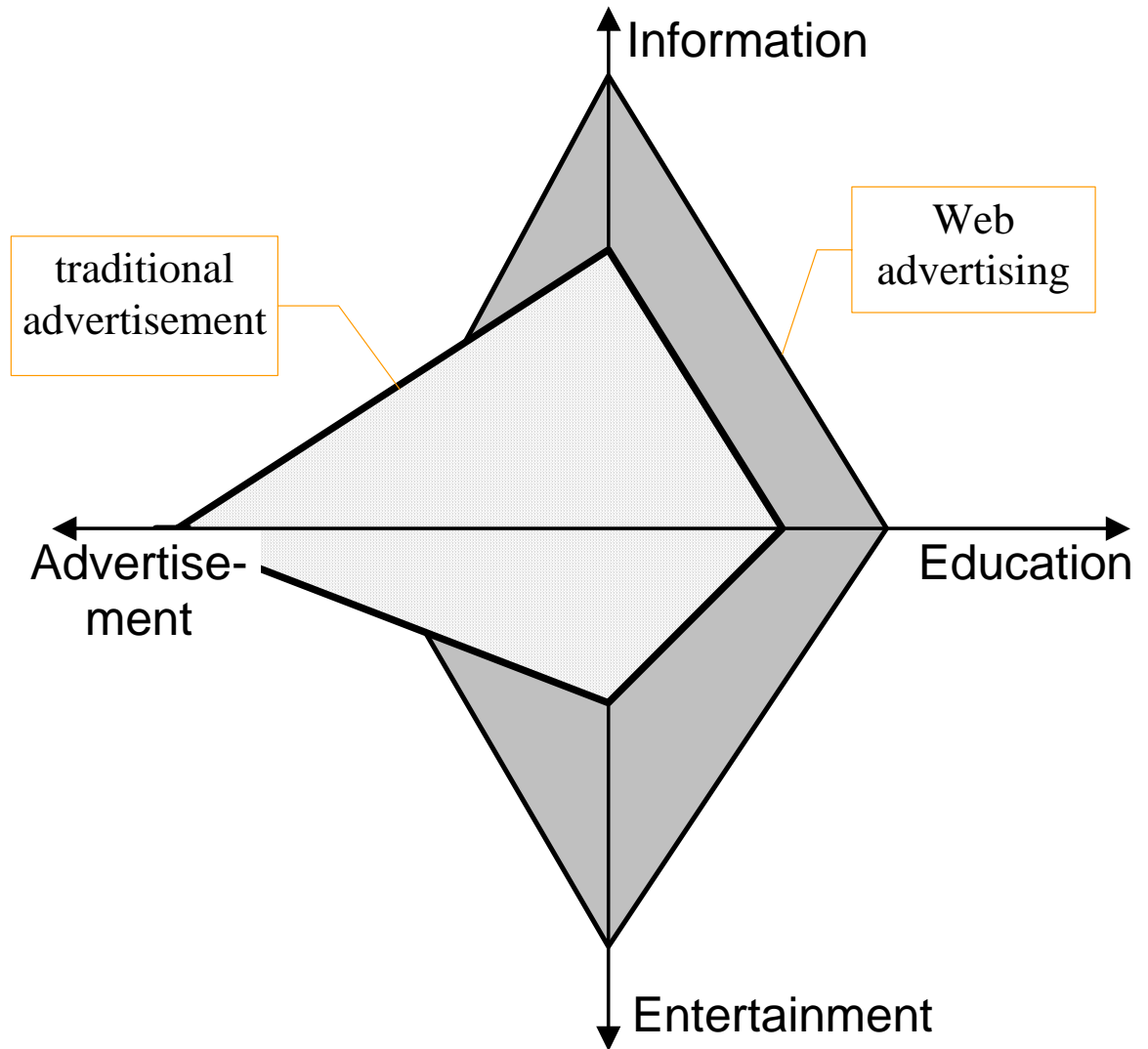
Properties of information

- Immaterial;
- Negligible copy cost;
- Can be easily and efficiently distributed;
- Information is not consumed;
- Information can be stored, however topicality is an important issue;
- Information value is difficult to assess ex ante (information paradox);
- Information is difficult to protect (enforceability of intellectual property rights or privacy);
- Revising or correcting published information is difficult; information diffuses easily and without the control of the authors.

(for details see e.g. Klein, Teubner (1999), p. 419 or Masuda, Y.: *Managing in the Information Society*, Cambridge, MA 1990)

Customer behavior: Content matters

Stylized information profile of traditional vs. Web advertising

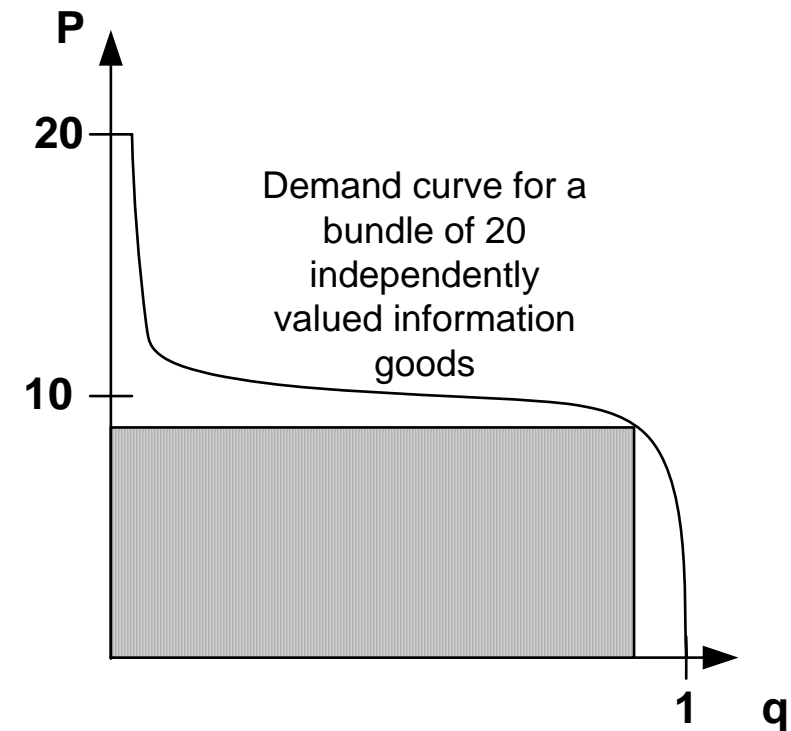
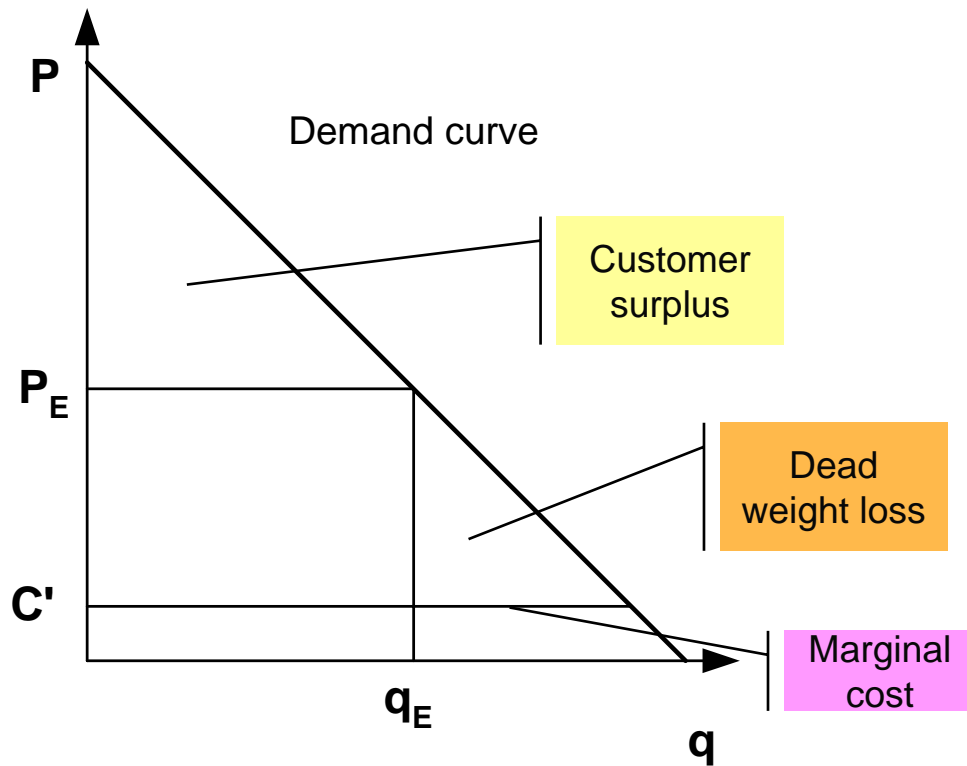


The economics of bundling

- A profit maximizing firm selling a bundle of 20 goods will set a price slightly below the mean value of the bundle at USD 10, and almost all customers will find it valuable to buy the bundle.
- In contrast, only half the customers would have bought the products individually had they been offered at a mean price of USD 0,50.
- Underlying assumptions:
 - minimal marginal cost for the bundle,
 - minimal communication cost,
 - minimal bundling cost and
 - minimal storage cost

Source: Bakos; Brynjolfsson: Aggregation and Disaggregation of Information Goods

Pay-per-view vs. bundling: which is more efficient?



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“Content matters” - Tourism as information product

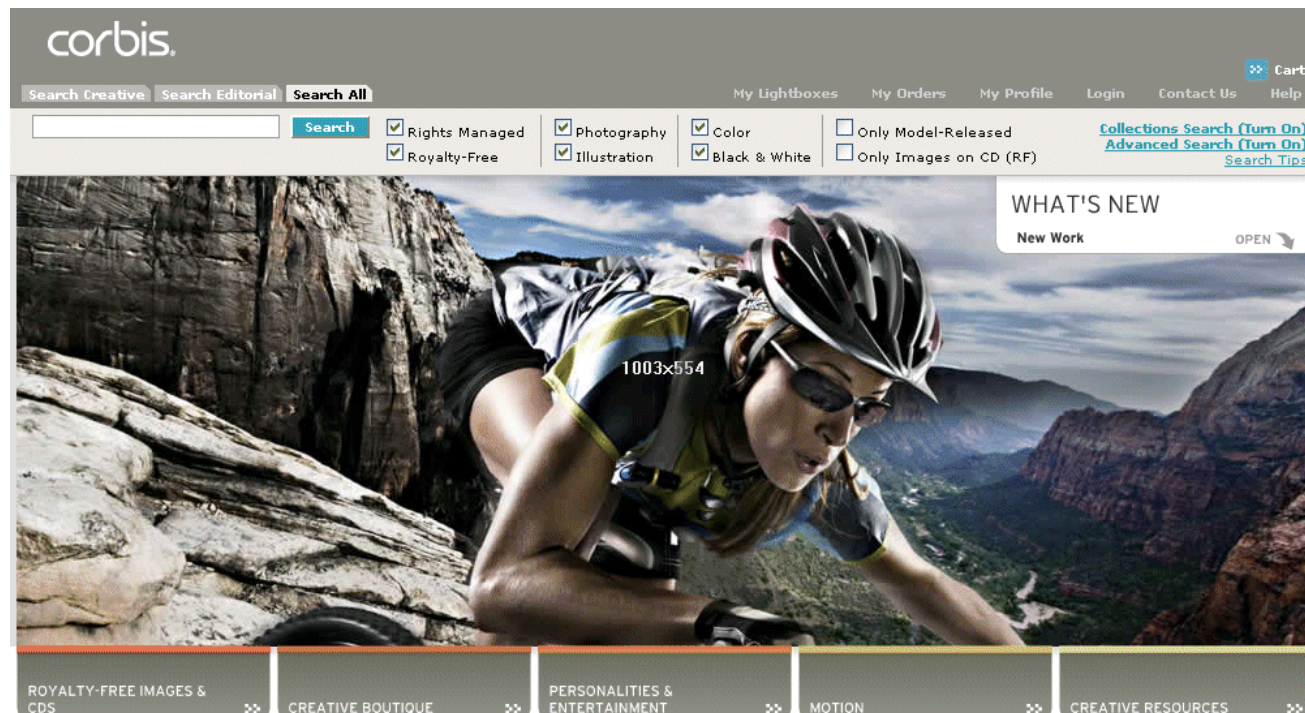
- ... requires attention on issues of information, presentation and communication.
- “The medium is the message” (McLuhan), i.e. the choice of medium (print, TV, Web ...) will shape the perception of the message.
- Product and supplier description.

TripAdvisor ... major products

- **Hotel/Attraction/Restaurant reviews:** In many ways the foundation of TripAdvisor, TripAdvisor has reviews and opinions on over 270,000 hotels, attractions, and restaurants. The hotel, restaurant, and attraction rankings found throughout the site are based largely on these reviews.
- **Travel wiki:** A [wiki](#) (based on a clusterized version of [XWiki](#)) in which users can add information on destinations as a way to aid potential visitors. Topics include transportation, activities and dining guides.
- **goLists:** Lists of places and activities compiled by users and usually on travel "themes", e.g., ten must-see attractions, stops on a walking tour, or ideas for a rainy day.
- **TripAdvisor maps:** A hotel map [mashup](#) combining TripAdvisor's hotel popularity index with Google Maps.
- **TripAdvisor Forums:** Message boards where travelers ask and answer thousands of destination and interest based travel-related questions every day. There are forums for individual destinations, air travel, cruising, and family travel.
- **Other resources:** Links to additional travel information and reviews available on other websites (e.g., newspaper, magazine, and travel guidebook websites). [Source: Wikipedia]

Bundling content from diverse sources

- Commercial archives for pictures, videos etc.
- Publishers of travel guides
- Geo information
- Users



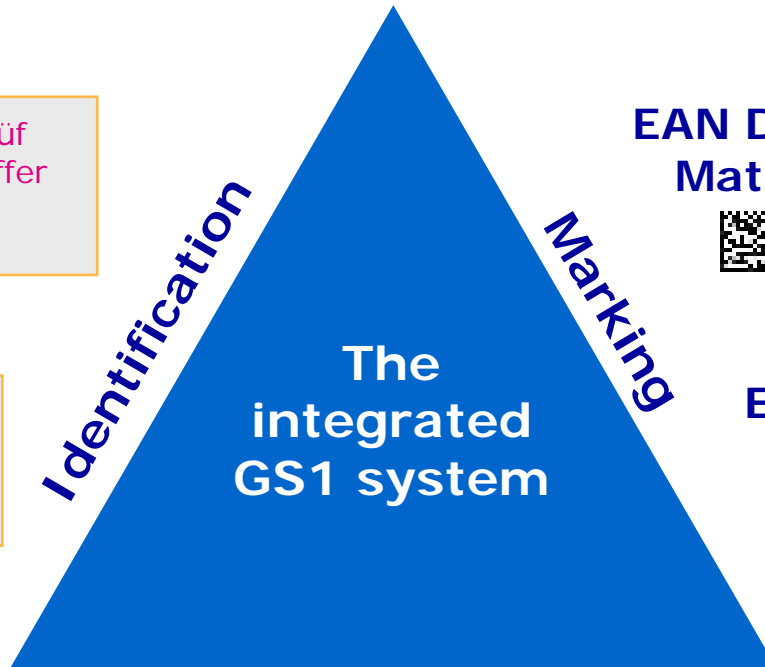
The role of standards in tourism

NVE

Res.-Basis-Ziffer	Basisnummer	Eigen-generierung	Prüf Ziffer
3	40 12345	00000000	0

ILN + EAN

Basisnummer	Eigen-generierung	Prüf Ziffer
40 12345	00000	9



EAN Data Matrix



EAN 128



EAN-8/EAN-13



EAN DataBar



RFID/EPC



WebEDI

Name (1)	Leistung	ILN	(2)
	Form	(6)	
	Struktur	(8)	
	PLZ	(4)	
	Land	(1)	
	Unternehmensnummer	(6)	
Bezeichnung (3)	Buchungstyp/Angebot	ILN	(115)
Kaufnr.	(16)	(4)	
Form	(4)		
Abteilung	(17)		
Struktur-Nr.	(18)		
PLZ	(19)		
Land	(20)		
Unternehmensnr.	ILN	(21)	
Form	(22)		
Abteilung	(23)		
Struktur-Nr.	(24)		
PLZ	(25)		
Buchungstypnummer	(21)	Num.	(22)
Buchnummer	(23)	Num.	(24)
Bücherbuchnummer	(25)	Num.	(26)
Unternehmensnr.	(27)	Num.	(28)
		Num.	(29)
		Num.	(30)

Data exchange

EANCOM®

BGM+380+48675-0060942'
DTM+137:20020228:102'
NAD+SU+400001000005:
:9'

GS1 XML

```
<order:order creationDateTime="2003-11-03T11:00:00.000"
documentStatus="ORIGINAL"
xsi:schemaLocation="urn:ean.ucc:2
../Schemas/OrderProxy.xsd">
<contentVersion>
<versionIdentification>2.1</versionIdentification>
</contentVersion>
```

Interoperability in tourism

The tourism industry essentially is an information-based business where data interoperability exchange is necessary to create a more dynamic market and to foster cooperation. The absence of a **widely adopted methodological/technological standard** in the electronic tourism, the high presence of various systems or standards and the consequent lack of interoperability hampers the further evolution of the tourism market and also a broader participation of the small and medium sized players.

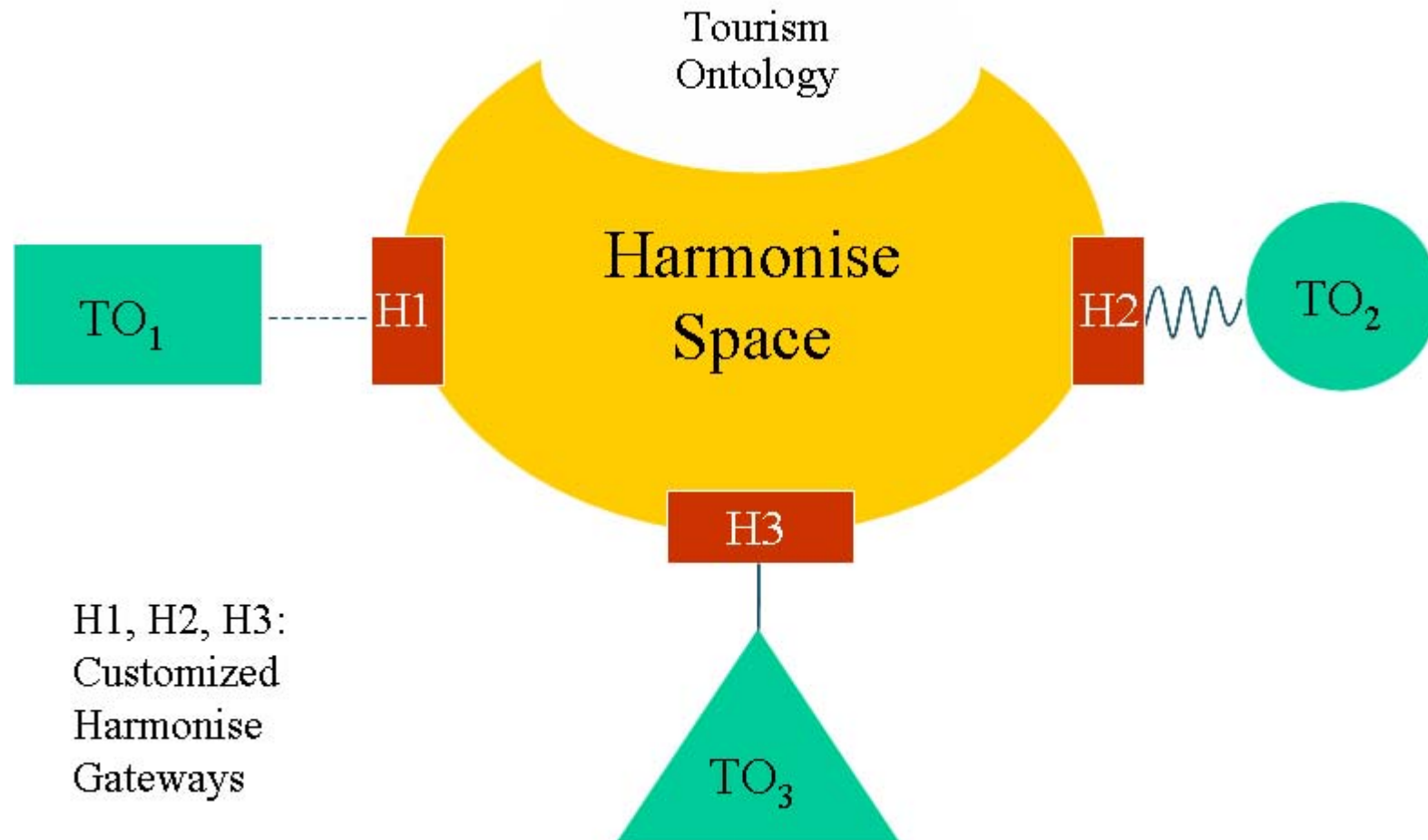
HARMONISE, in coordination with other initiative and with the involvement of international tourism organizations (ETC, IFITT, NTOs, etc), establishes bridges between existing and emerging on-line marketplaces by means of a more flexible approach for harmonising them in opposite to the previous fixed standardisations.

[<http://www.harmonize.org/index.php?option=content&task=view&id=5&Itemid=29>]]

Objectives of HARMONISE

- The main goal of the project was the creation of a network that reinforces the data interoperability within the tourism industry. This was achieved by putting together different market participants and the major domain experts in a guiding consortium which had the following tasks:
- To compose an enlarged task force on tourism standards interoperability which allows the entrance of new users/partners, based on minimal rules;
- To identify a minimal set of common concepts in the tourism domain as a starting point for developing a shared, conceptual reference schema, the so called *Interoperable Minimum Harmonise Ontology (IMHO)*;
- To develop a reconciliation tool allowing the partners to keep their specific concepts and proprietary data formats and, simultaneously, carry out effective communication and interactions.

The Harmonise Space



The HARMONISE approach

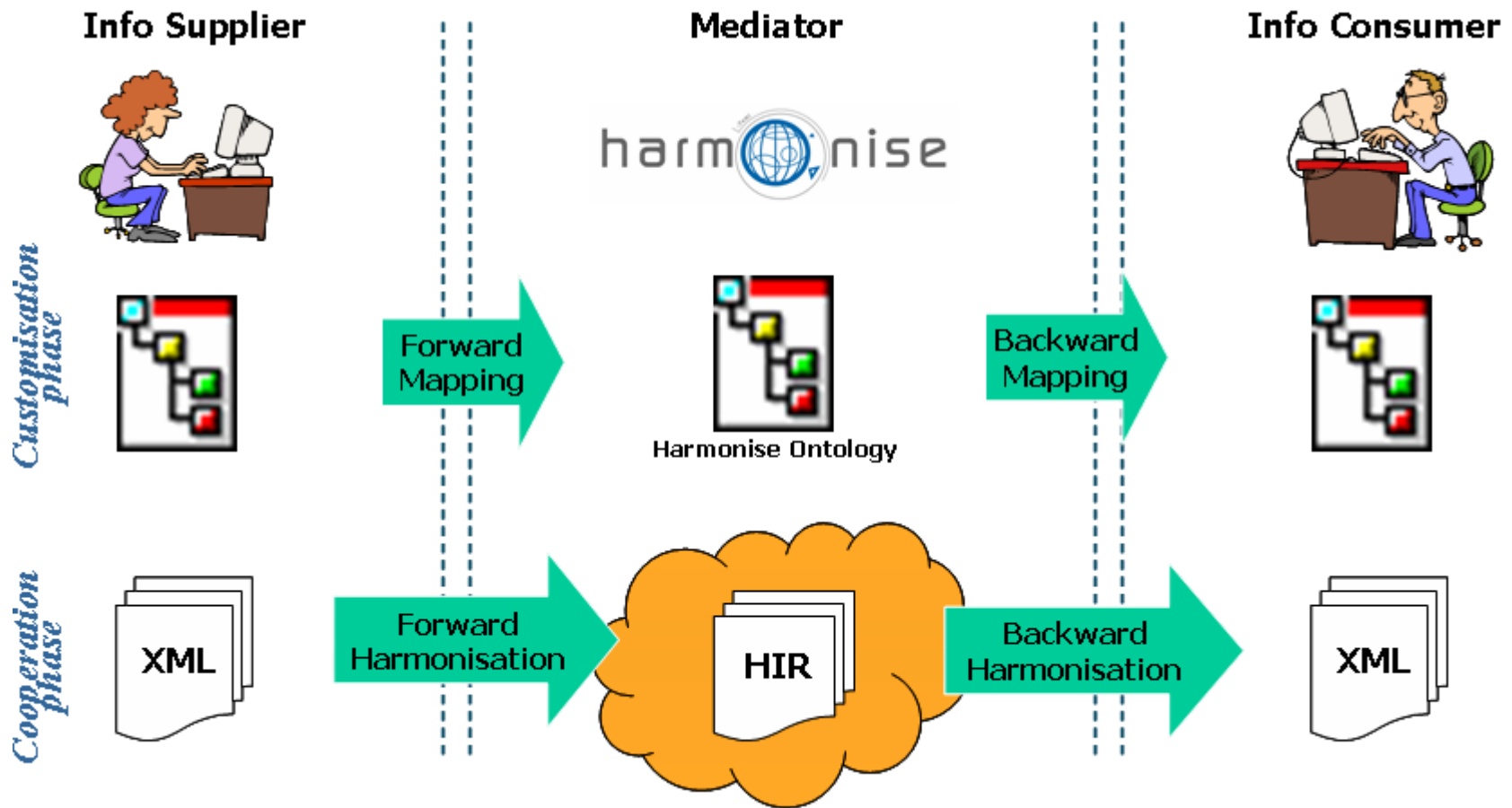
- In order to solve the interoperability problems, Harmonise takes a mediator approach. A data mediator is a computer program that translates data between two systems with different data schemes. The mediator acts as a semantic gateway between the systems, permitting the receiver to view the source as an extension of its own database, without concern for the differences in names and representations of data. Therefore the Harmonise solution allows actors to retain their existing data models unchanged, while being able to communicate and interoperate with all other participants to the Harmonise virtual network.
- Building a mediator for any two actors in a tourism industry network quickly becomes infeasible. So a shared minimal set of concepts (the IMHO) representing the most relevant concepts for main parts of the tourism industry (e.g. accommodation and travel), has been established by the group of experts in the Harmonise consortium. Data reconciliation among different tourism information systems is obtained with respect to this domain ontology.

The Harmonisation process

The Harmonisation process is obtained pair wise by means of the cascading composition of the two specific phases.

- The *customisation phase* is based on the semantic mapping between the data owned by the user and the concepts in the IMHO. This phase is executed once when a new tourist organisation enters in the Harmonise network. An actors local data is assumed to be available in XML format with an according XML schema document existing. An RDF (Resource Description Framework) Schema is automatically extracted from the local XML schema and is then manually mapped against the IMHO (available as RDFS). The output is a set of Custom Reconciliation Rules which will be used during the Co-operation phase.
- The *co-operation phase* aims to transform the user's data format in a representation suitable to be exchanged with any other user of the Harmonise network, based on the Custom Reconciliation Rules.

The Mediator Concept



Agenda

1. The concepts of information goods
2. Tourism as information good
3. Content syndication and content targeting

Content related business models

- Web search
- Contextual commerce ... selling travel, lodging, or entertainment providers **sponsored links** on pages with related content – example Trip Advisor
- Content syndication

Imagine ...

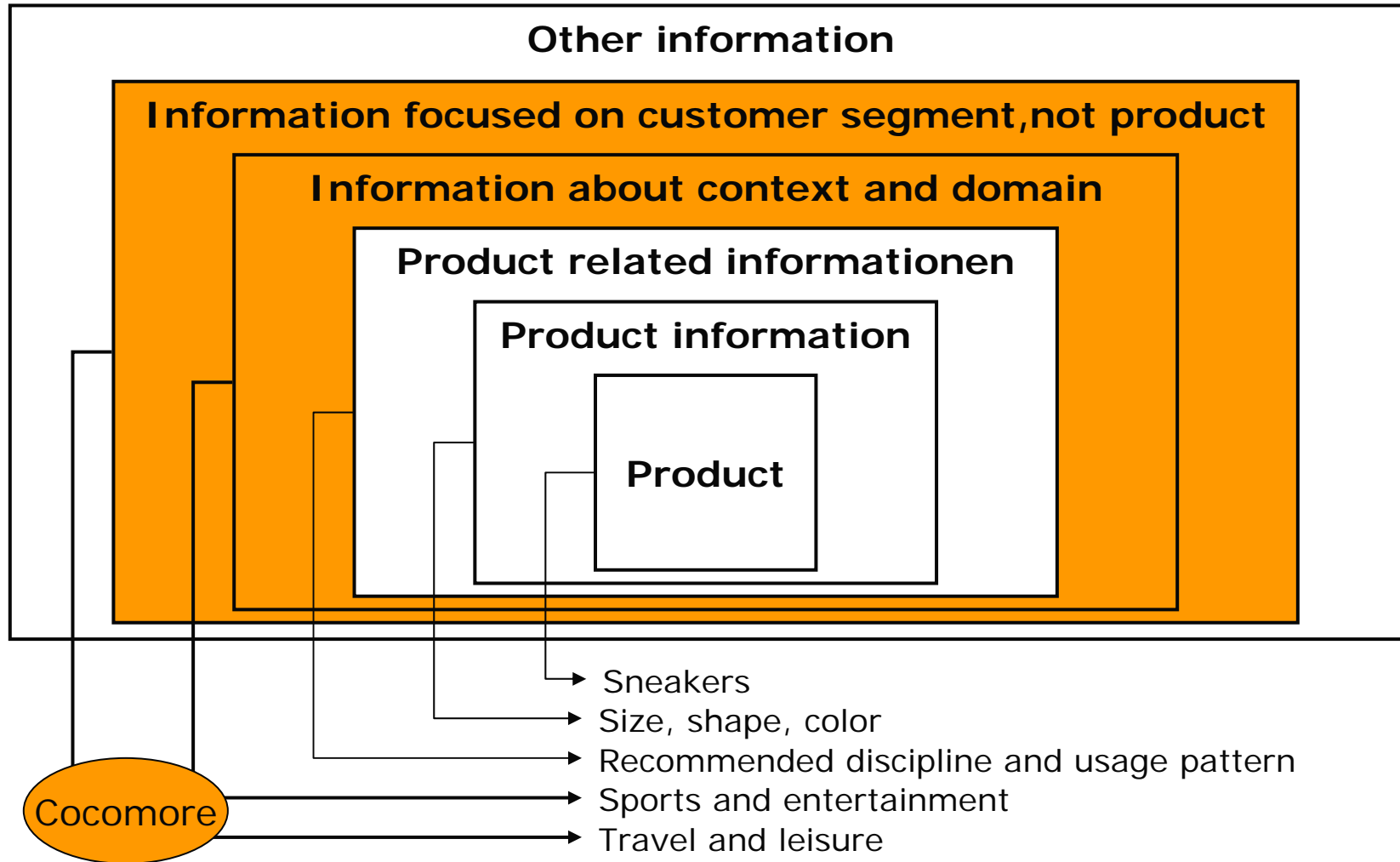
You were

- the editor of a customer magazine offered by a railroad company or an airline or
 - The Web editor for a travel booking site.
-
- What type of content would you select?
 - What criteria would you use?

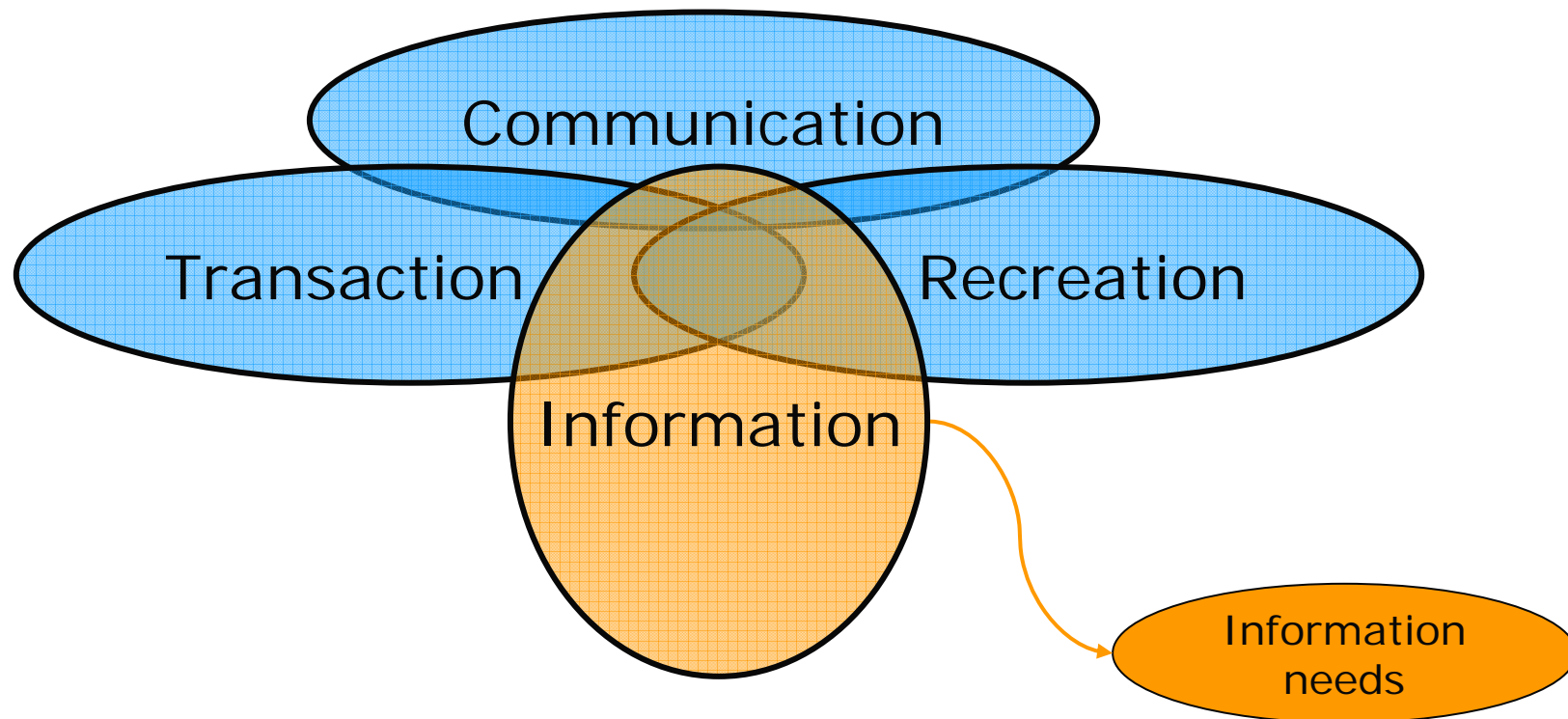
Cocomore: Designing the content space

- Business model: Content syndication
- Product: turn-key content management systems for supplementary content, i.e. in addition to product catalogs and technical specs
- Questions:
 - Online information behavior, search patterns, reading patterns etc.
 - Modes of information behavior: browsing, window shopping, strolling, targeted search, serendipity, en passant content "consumption" ...
 - Expectations and perceptions of the content space: how can suppliers of goods and services position themselves as attractive content providers
 - Design implications: combining transactions with content

Supplementary content



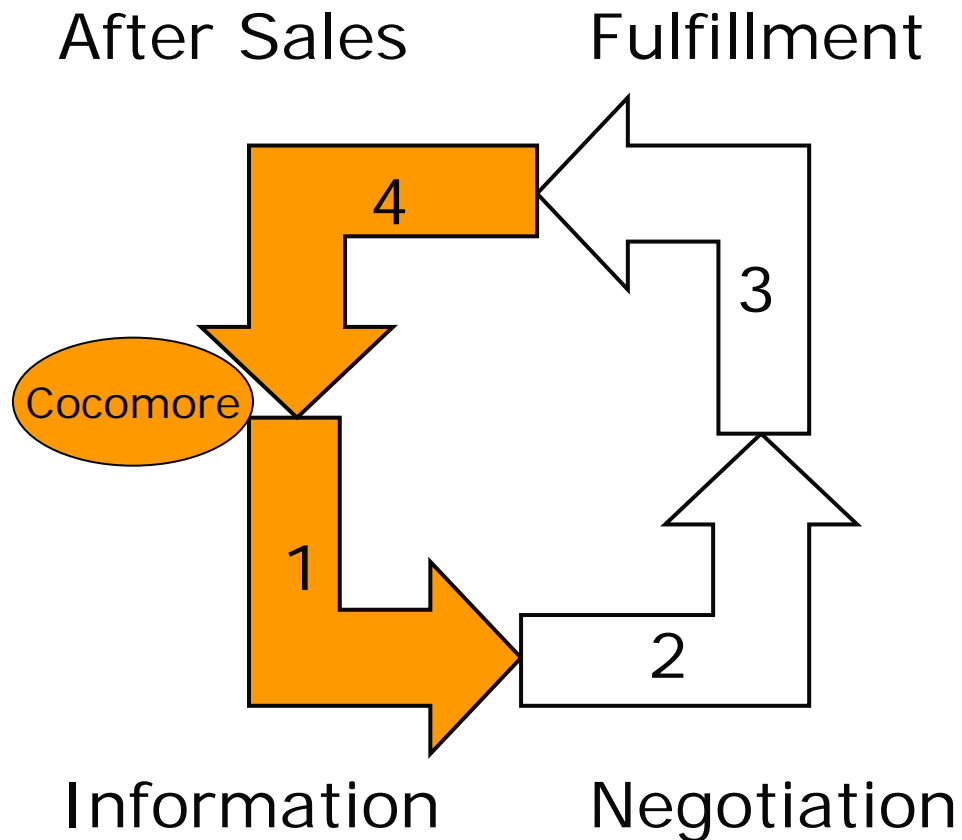
Contexts for using online information



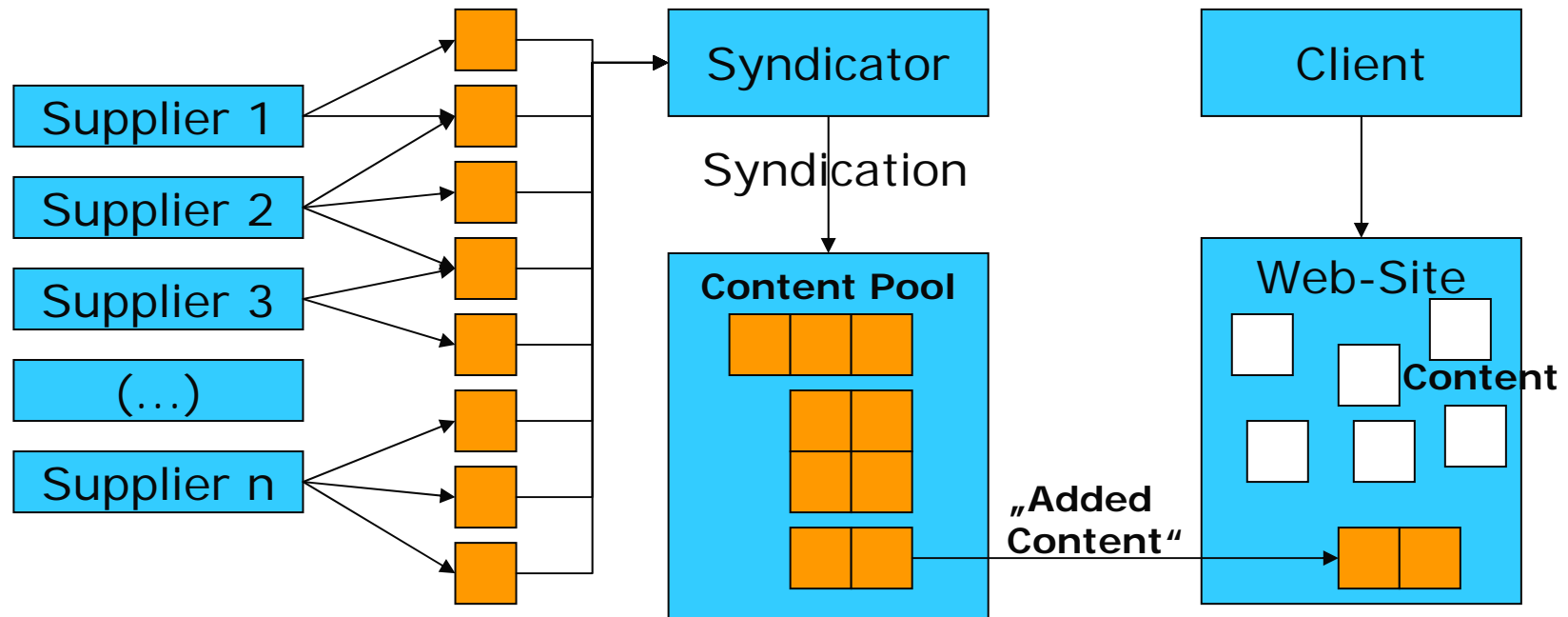
Content in the customer buying cycle

Added Content is primarily used in the information and after sales phase.

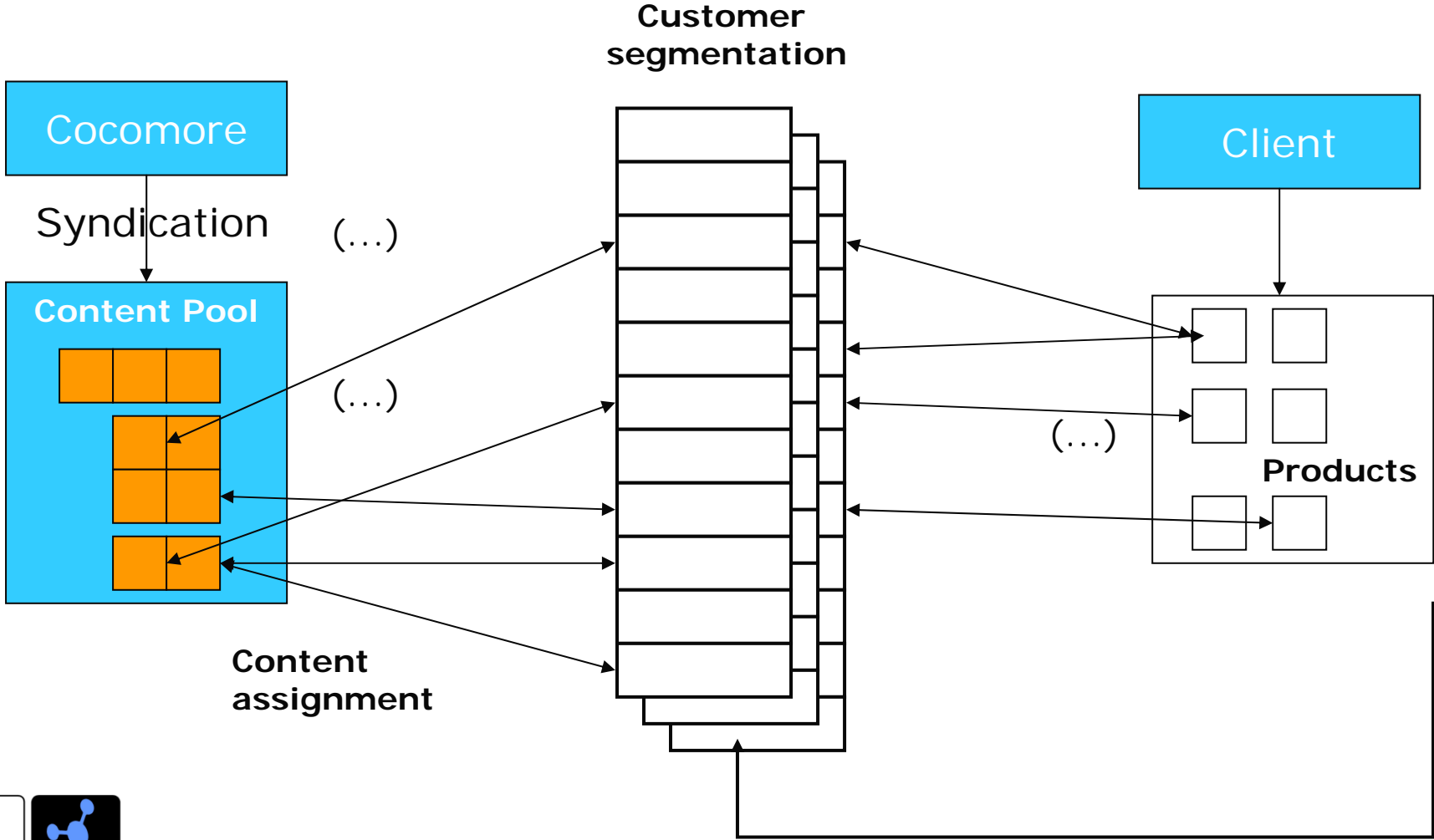
The goal is to increase customer retention and loyalty.



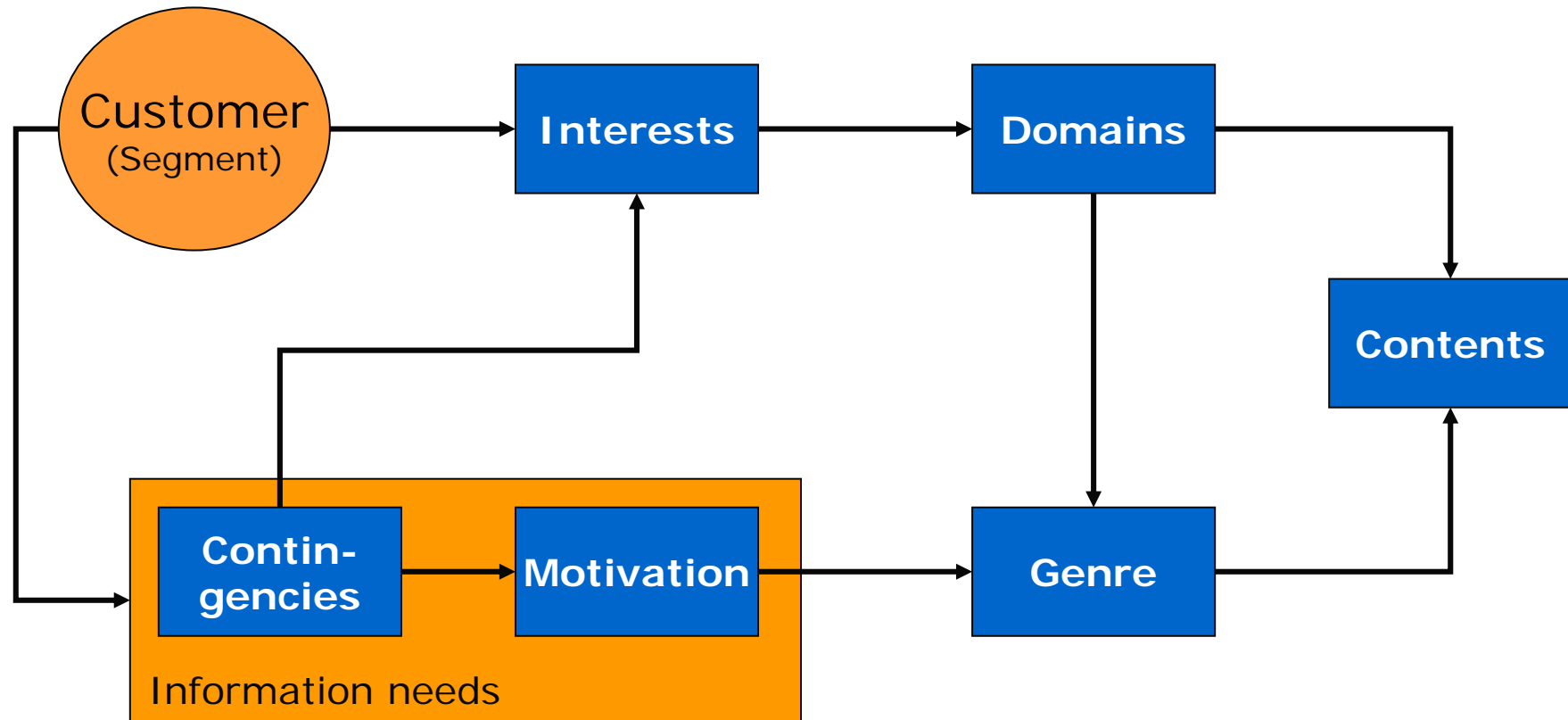
Content syndication



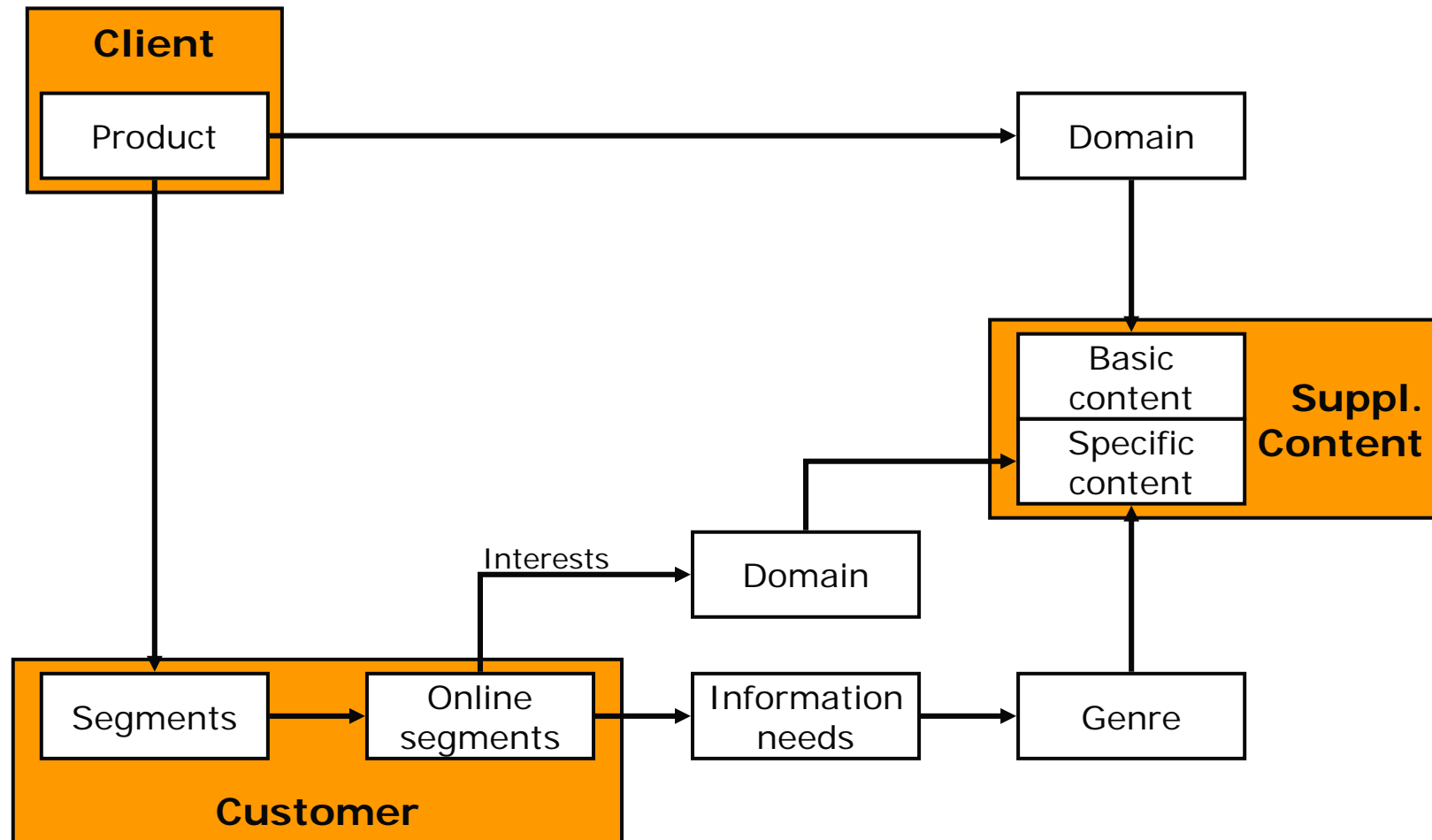
Framework



Linking customers and contents



Client focussed content configuration



Conclusions

- Information goods have unique economic properties.
- They have been profoundly affected by the emergence of digital technology.
- However, setting-up sustainable business models is quite challenging
 - IPRs
 - Excluding third party consumption
 - Product description
 - ...