April 26-28, 2021

CIDM

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Understanding the content ecosystem to map microcontent

PEIHONG ZHU & ROB HANNA

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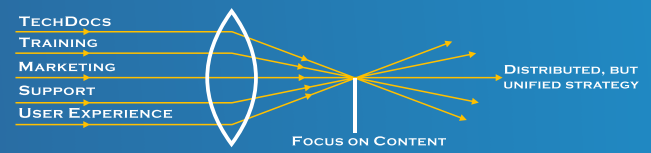

Who we are…

The issue…

One of the least-explored areas for information architects is the examination of relationships between different types of information. Most often this is left to the devices of the author or the arcane arts of the taxonomist to determine what is related to what. Even if we can manage relationships between topics with some skill, managing the relationships between fragments of microcontent become exponentially more difficult.

mindtouch CONTENT EXPERIENCE INFLUENCER TOP 25 2017

2017 mindtouch CONTENT EXPERIENCE STRATEGIST TOP 200

EContent 2018 2019 100 COMPANIES THAT MATTER MOST IN THE DIGITAL CONTENT INDUSTRY

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"Build trust in your content."

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Make your information easier to use

Your partner in ...

Structured Authoring

Writing

Conversion

Training

Content Strategy

Information Architecture

Consulting & Support

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Publishing Technologies

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Select clients

FinTech

- TSYS
- mastercard
- shopify
- Moneris

Banking

- Westoba Credit Union Ltd.
- Barclays
- conexus Credit Union
- coastcapital Savings

Insurance

- ICBC Insurance Corporation of British Columbia
- eviCore healthcare innovative solutions
- NCCI
- BCAA CAA

Life Science

- Edwards
- AJCC American Joint Committee on Cancer — Validating science. Improving patient care.
- Syneos Health
- Children's Healthcare of Atlanta

Pharma

- Lilly
- Apellis
- MERCK

Government

- SASB Sustainability Accounting Standards Board
- Nuntium Company Custody
- NRC·CNRC

Hightech

- HydraForce Power Forward
- Ultimate Software People first.
- Bell
- Christie
- Genetec
- REDSEAL
- Celestica
- xerox

Management Consulting

- Deloitte.
- KPMG

We're talking about

This session will explore the enterprise content metamodel to understand how information behaves in a larger ecosystem and map out a universal information model across any enterprise.

1. Content linking relationships
2. Universal information models
3. Information behavior
4. Role of Artificial Intelligence

The rise of microcontent

Microcontent

Is content that is

- about one primary idea, fact, or concept
- easily scannable
- labelled for clear identification and meaning, and
- appropriately written and formatted for use anywhere and any time it is needed.

It’s not microcontent just because it’s small

Complexity of content grows bigger

Scroll Codex Document Page Topic Block Fact

Units of content get smaller

Scroll Codex Document Page Topic Block Fact

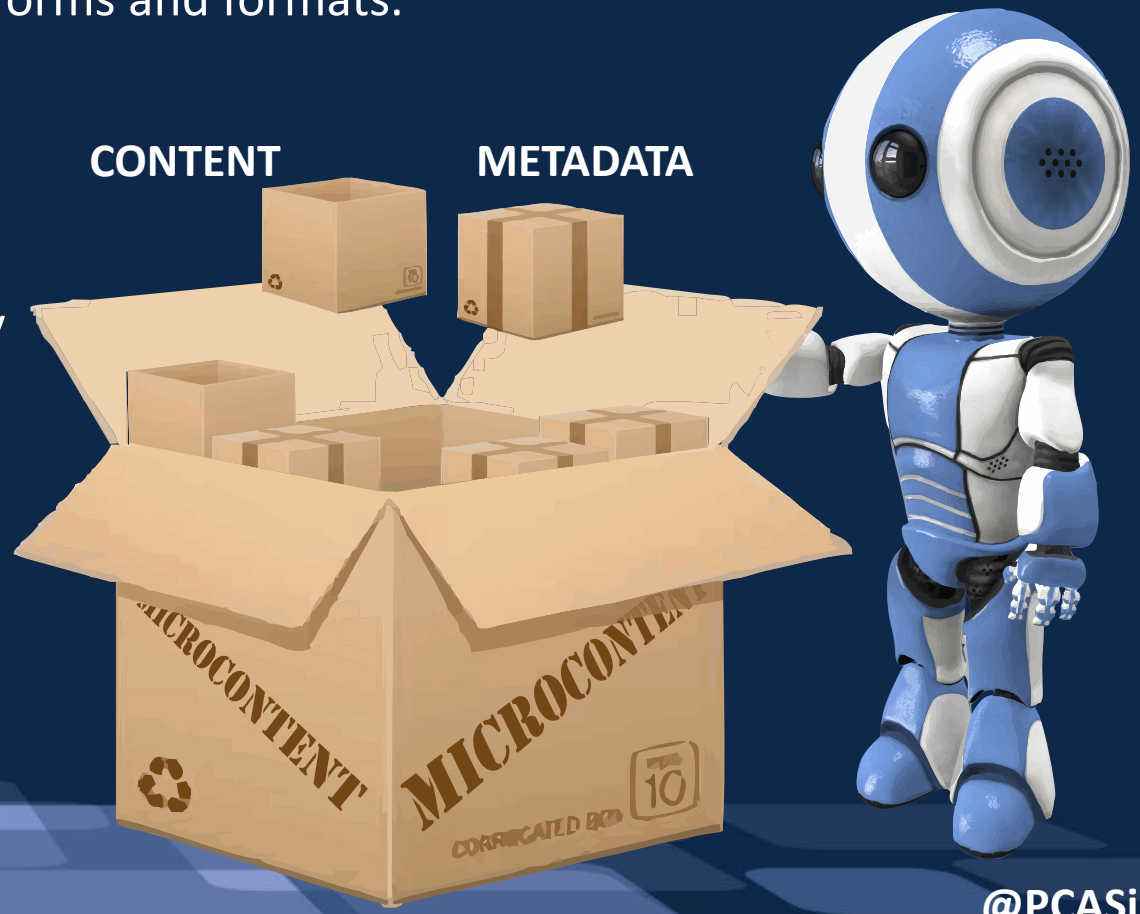
Microcontent as a medium for exchange

Microcontent is not strictly an input nor an output format. Instead, microcontent is a medium for exchanging information across different platforms and formats.

Units of microcontent need to contain

- piece of standalone content, and
- metadata records.

Content and metadata need to be automatically extracted at publishing time.



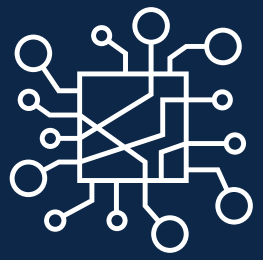
Four principles of intelligent microcontent

1. Focus
Limit microcontent to a single answer to a question

2. Function
Classify microcontent to identify intended user response

3. Structure
Use predictable patterns and language

4. Context
Make microcontent easily relatable to other content



Context

Microcontent must be easily relatable to other content

The dilemma of linking microcontent

Microcontent must not be tightly-coupled with its context
— so that it can be mobile

Yet microcontent must be able to connect with its context
— it needs to **link** to its **context** to be meaningful

To understand this dilemma, we need to examine

- how information linking works
- how context is constructed

The evolution of information linking

(Almost) all human knowledge under one system

Melvil Dewey - Wikipedia

Dewey Decimal Classification

Unified taxonomy
Unambiguous, organized relationship

[AltaVista the oldest search engine is no more! (devilsworkshop.org)]

[https://www.bloomberg.com/opinion/articles/2020-01-07/open-protocols-would-make-such-a-better-internet]

B.G. – Before Google

Now

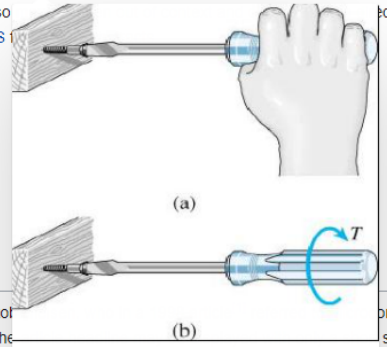
The problems of free range hyperlinks

Microcontent

From Wikipedia, the free encyclopedia

There are at least two interpretations of the term **microcontent**. Usability adviser Jakob Nielsen originally referred to microcont
page titles, subject lines and e-mail headings. Such phrases also ectory, sea
variety of contexts, including instant messages, blog posts, RSS

Contents [hide]
1 Original meaning
2 Other meanings
3 Further reading
4 See also
5 References



Usability can be described as the capacity of a system to provide a condition for its users to perform the tasks safely, effectively, and efficiently while enjoying the experience. In software engineering, usability is the degree to which a software can be used by specified consumers to achieve quantified objecti

Original meaning [edit]

The original meaning of microcontent is by usability adviser Jakob ontent as
original context. For instance, on a search engine result page, the snippet b
newspaper headline techniques, such as puns, teasers and other ory is alrea

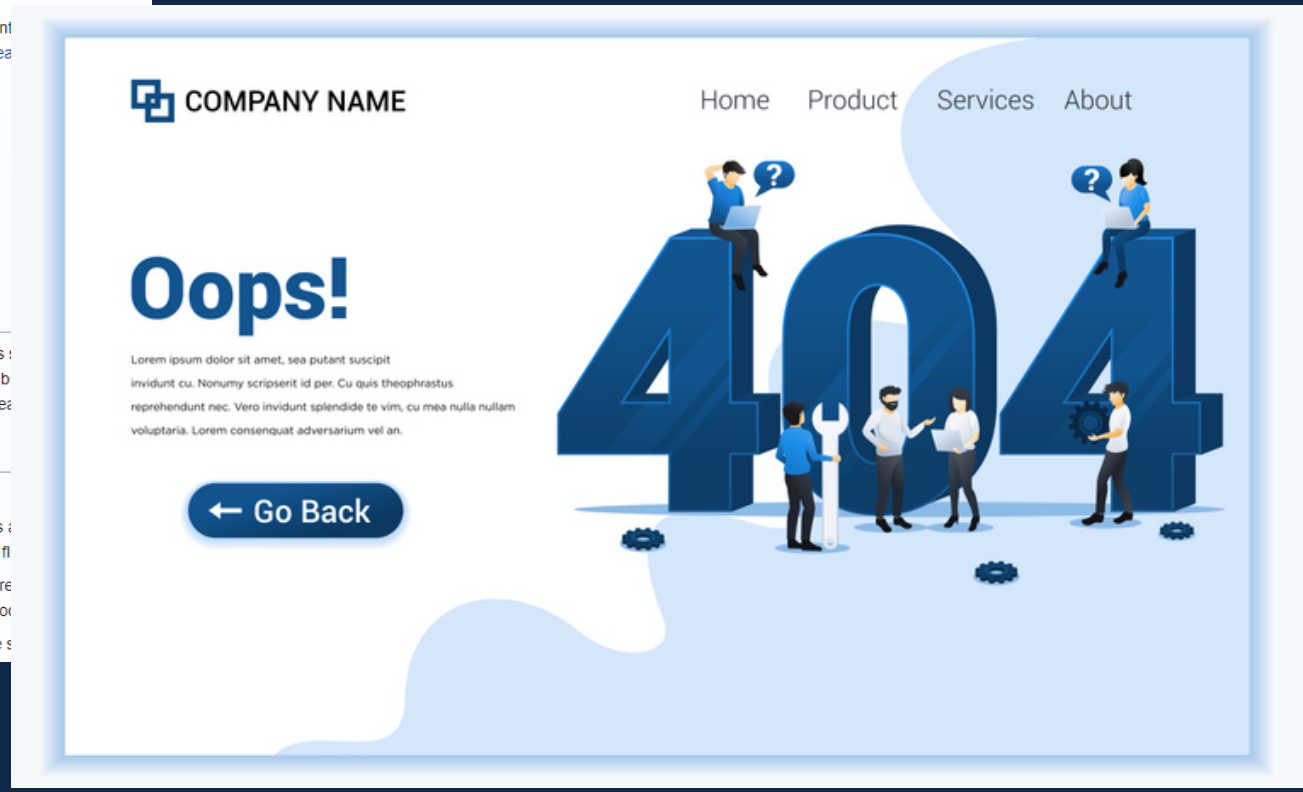
Other meanings [edit]

The second meaning of the term has been defined by blogger An

> "Today, microcontent is being used as a more general term in ncept, is
> browsers, or on handheld devices as needed. A day's weathe airplane fl

In the years of the booming blogosphere the term became import t structure
and wikis), and not least by new socio-cultural practices (people ing micro

Microcontent could be other forms of media like an image, audio, video, a URL (hyperlink), Metadata like author, title, etc., the s



Linking in DITA

- Topic linking -- <link> and <topicref> allow linking to topics
- Fine-grained -- <xref> allows link to elements
- Easier to manage -- <reltable> manages related links with a centralized relationship table
- More flexible -- keys and keyrefs allow for redirecting links

What if …

- links can be based on meaning?
- we can link to information that we do not know existed?
- links can grow organically and automatically when new information becomes available?

Tim Berners-Lee's vision of semantic web

- Transforming document web to data web.
- The goal is to make **the meaning of internet data** machine-readable.
- The intelligent agent can do reasoning for human.

RDF triple: atomic expression of a relationship

Subject

Pablo Picasso

Predicate

Painted

Object

Guernica

Object

Reina Sofia Museum

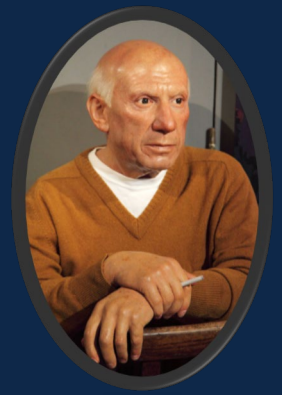
Is owned by

Predicate

Co-founded

Cubist movement

Object



Subject

Predicate

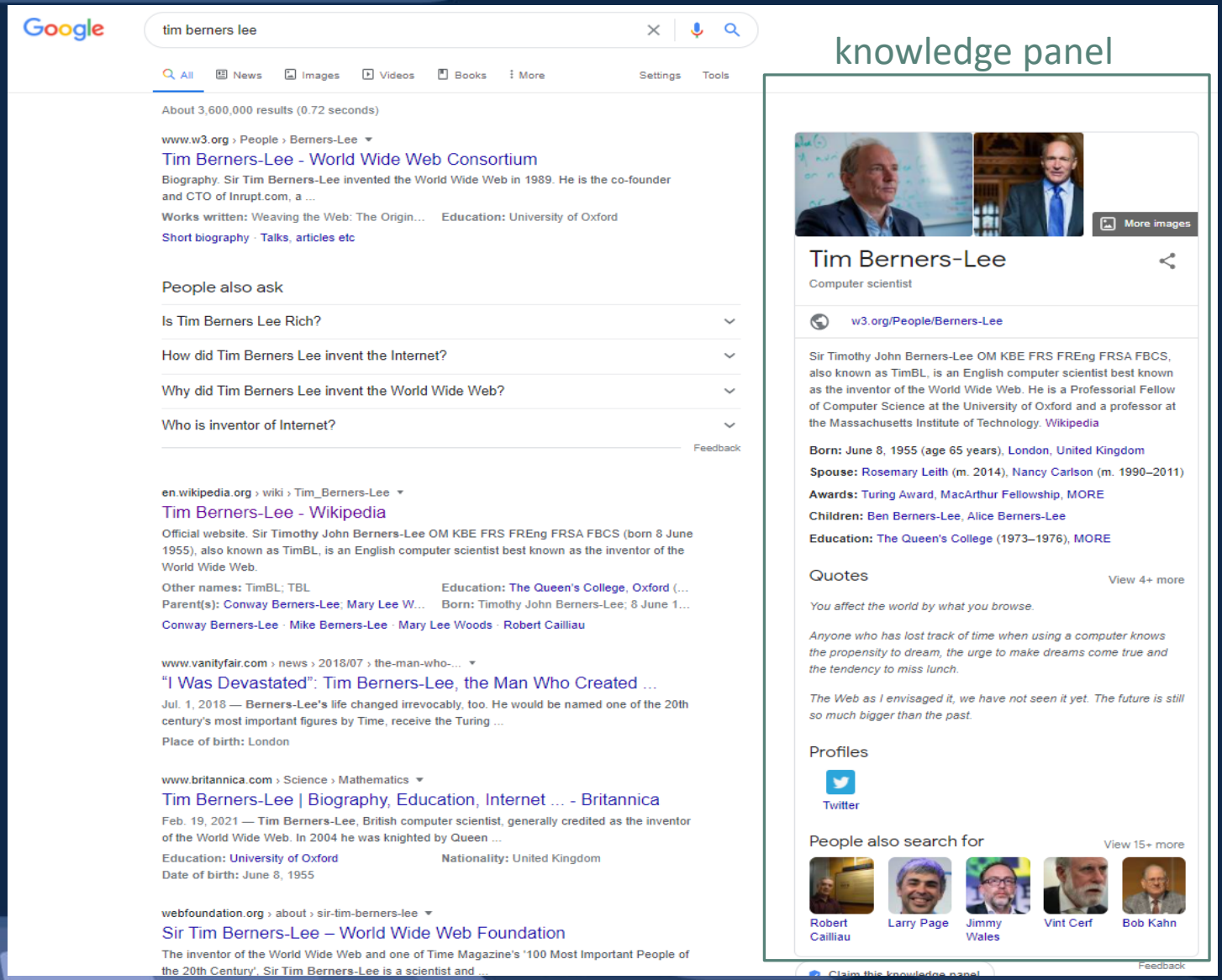
Is about

Spanish civil war

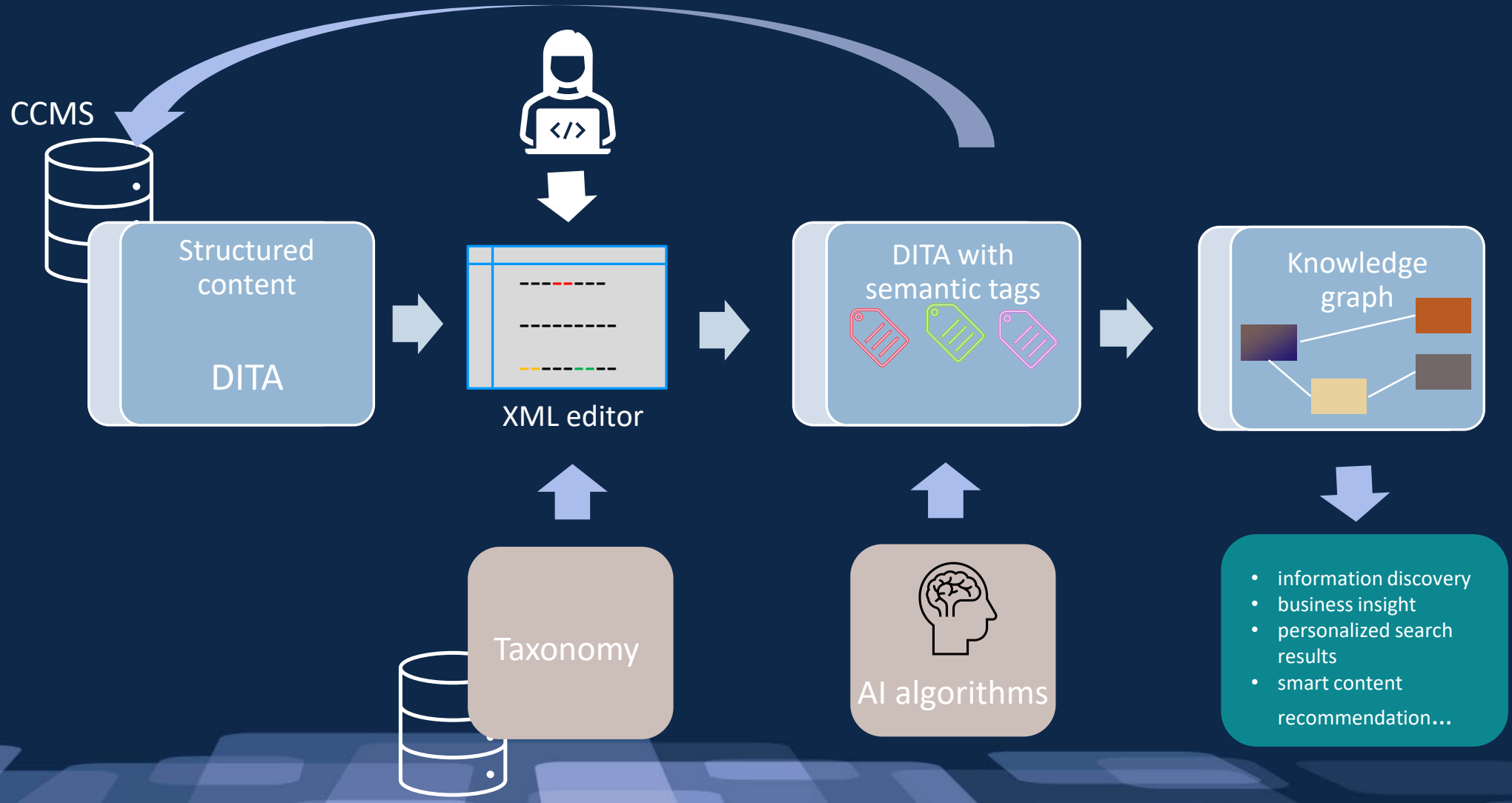
Object

Semantic link makes search better:

Google knowledge graph



When DITA meets semantic linking



What is missing?

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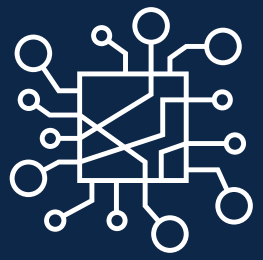

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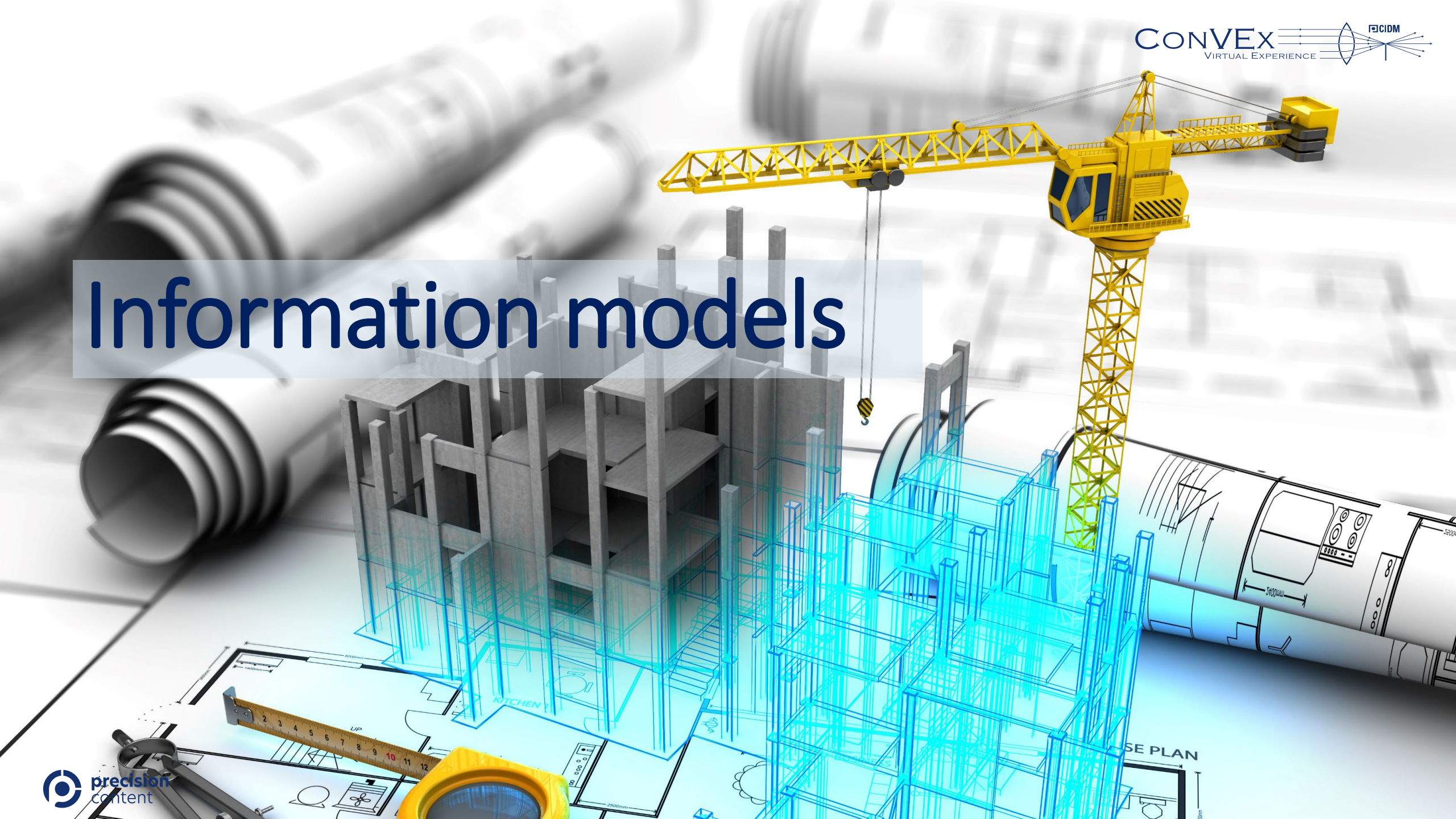
Context from the Source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Information models
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Information Mapping®

Robert E. Horn at Columbia and Harvard Universities

Core of the method developed.

- 1966: First practical application of method
- An information retrieval system to inform organizations of Federal funding in Great Society programs

Information Types

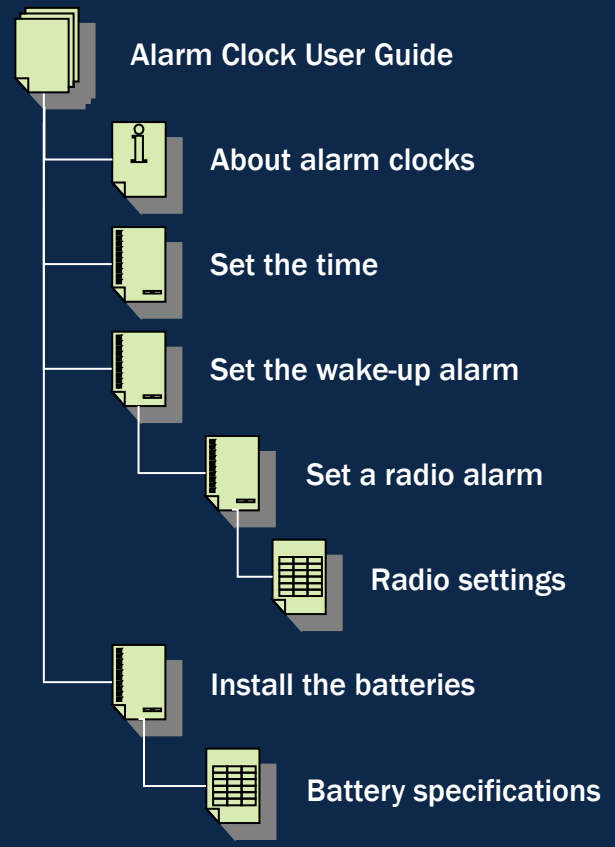
USER QUESTION	INFORMATION TYPE
“What is the (value)?”	Fact
“What must I do?”	Principle
“How do I do it?”	Procedure
“How does it work?”	Process
“What does it look like?”	Structure
“What is it?”	Concept

DITA 1.0 Information Model

DITA was designed to support Task-based authoring methodology for end-user documentation

This approach consists primarily of identifying specific tasks users need to perform to be successful with their product

Concept and reference information is added to supplement the tasks and give the user better understanding of the product to improve likelihood of success



Information Behaviors

What behaviors characterize information?

Information is a product of an organic mind

Information is Organic

An organism is defined as

- a complex system having properties and functions determined not only by the properties and relations of its individual parts, but by the character of the whole that they compose and by the relations of the parts to the whole.

An ecosystem is defined as

- a system formed by the interaction of a community of organisms with their environment.

Information properties and behaviors

Structured information possesses several common distinguishable properties and behaviors

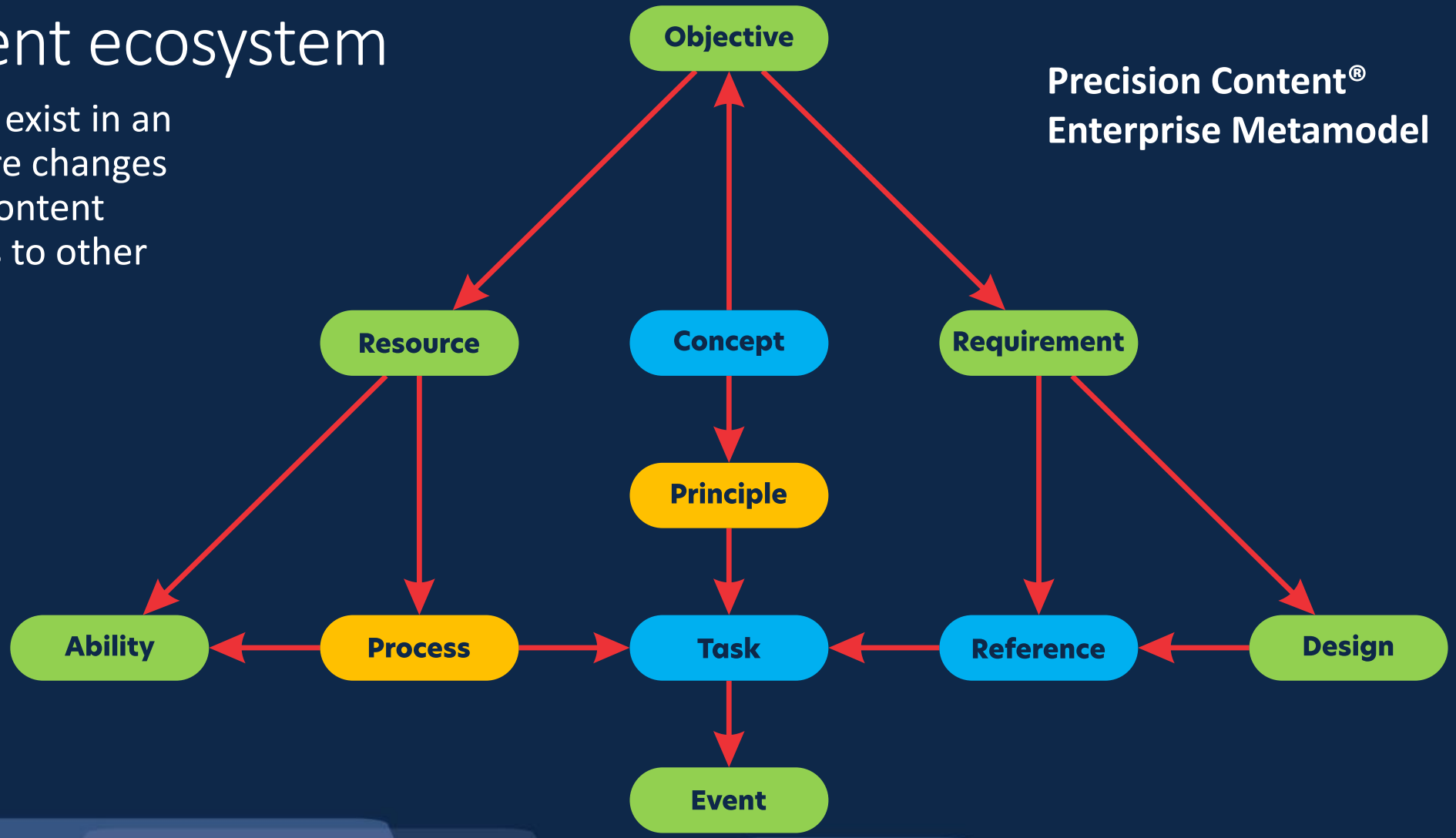
Structured information is

- Modular
- Traceable
- Recursive
- Patterned

Our content ecosystem

Content objects exist in an ecosystem where changes to one type of content prompt changes to other related content.

- DITA
- PCDITA
- Enterprise



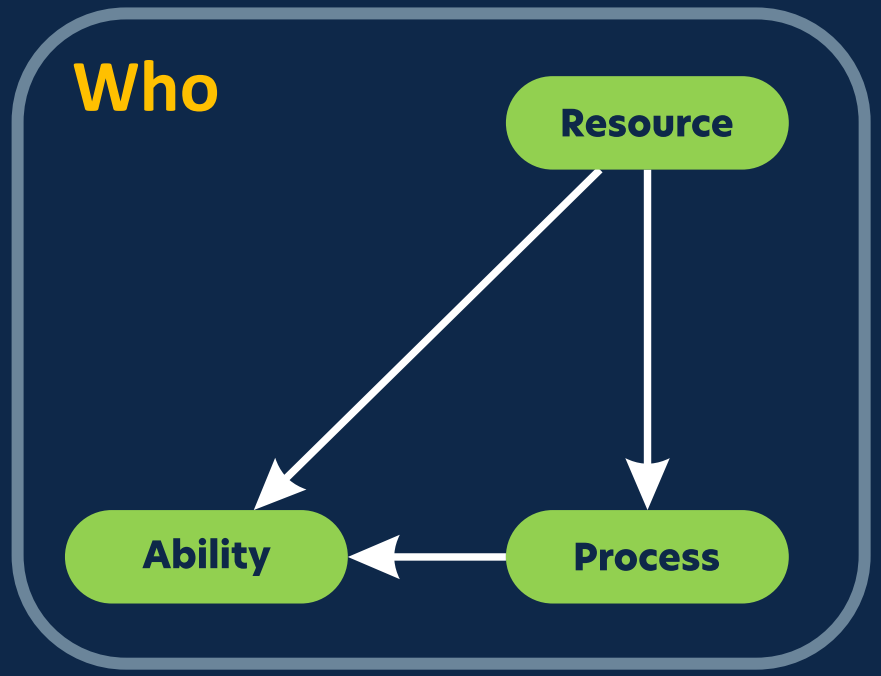
Human Interrogatories

Each of the objects in the model lines up with interrogatories humans use to understand the world around them.

WHEN is captured as part of Objective (Future) and Event (Past) types.

WHERE is captured as part of (a) Objective, (b) Event, (c) Resource, and (d) Reference types.

Human Capital



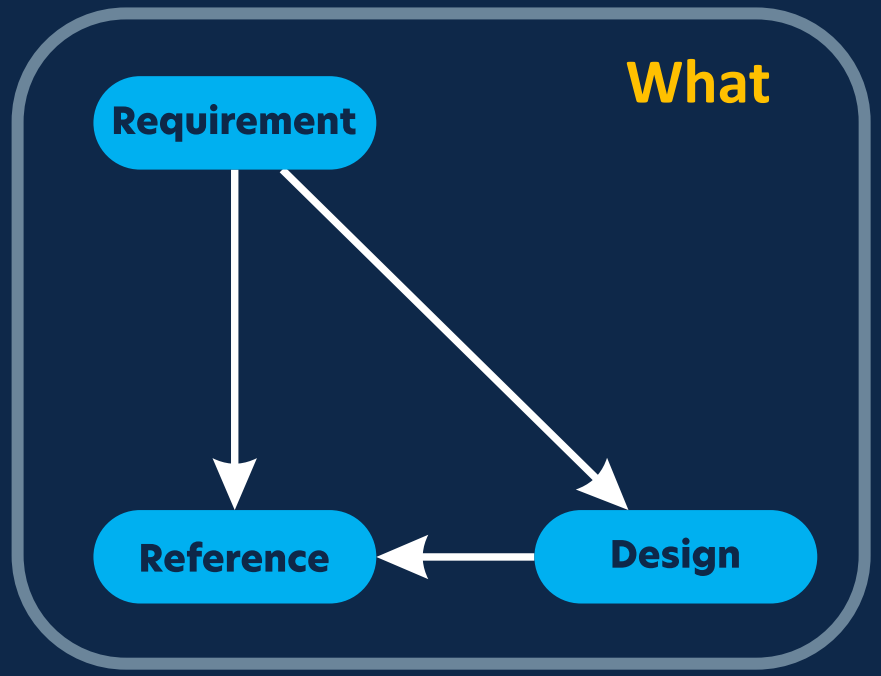
Process describes what is to be performed

Process is performed by a Resource

Processes require specific Abilities

Resources possess specific Abilities

Physical Capital



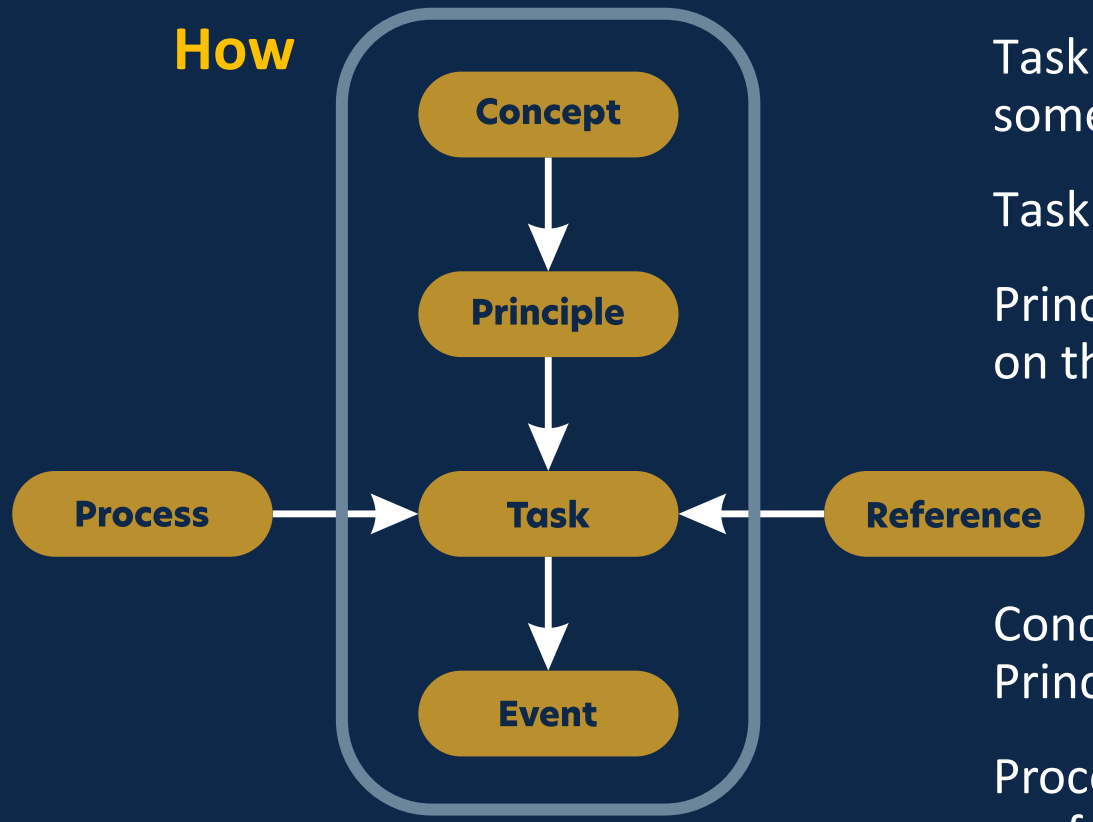
Reference describes specifications for a tool and its benefits and features

Design describes how the tool works

Requirement governs Design

And aligns with the specifications of Reference

Operations



Task describes how to do something

Task produces an Event

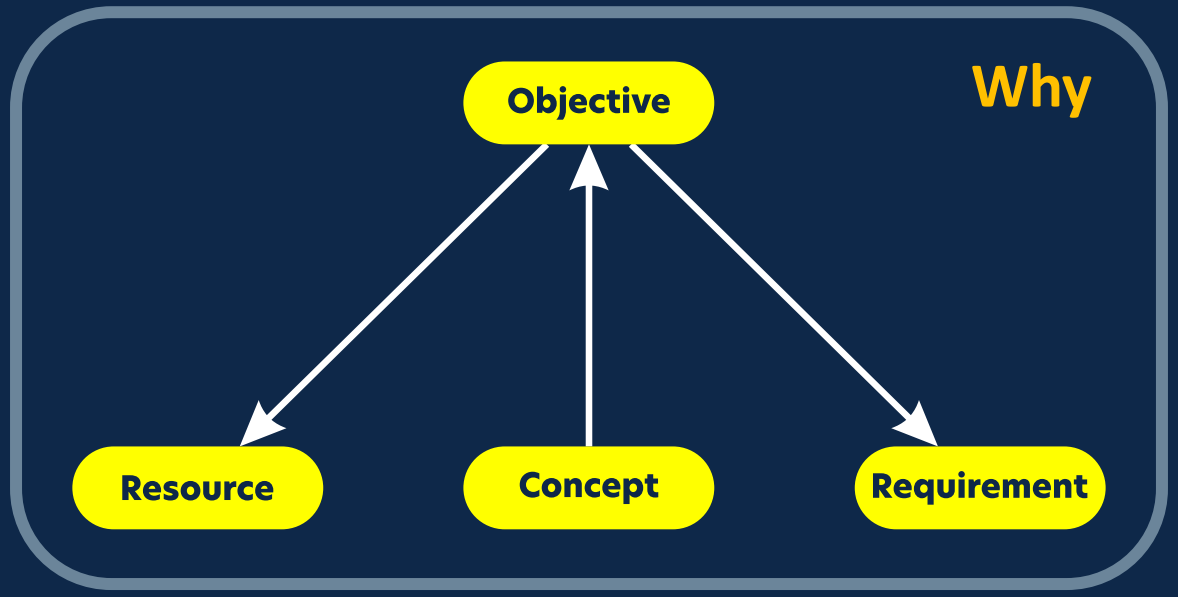
Principle describes limitations on the Task

Concept provides terms for Principle

Process describes what is to be performed by the Task

Reference describes the tools used in the Task

Strategy



Objective describes a need or goal to be achieved

Concept terms inform objectives

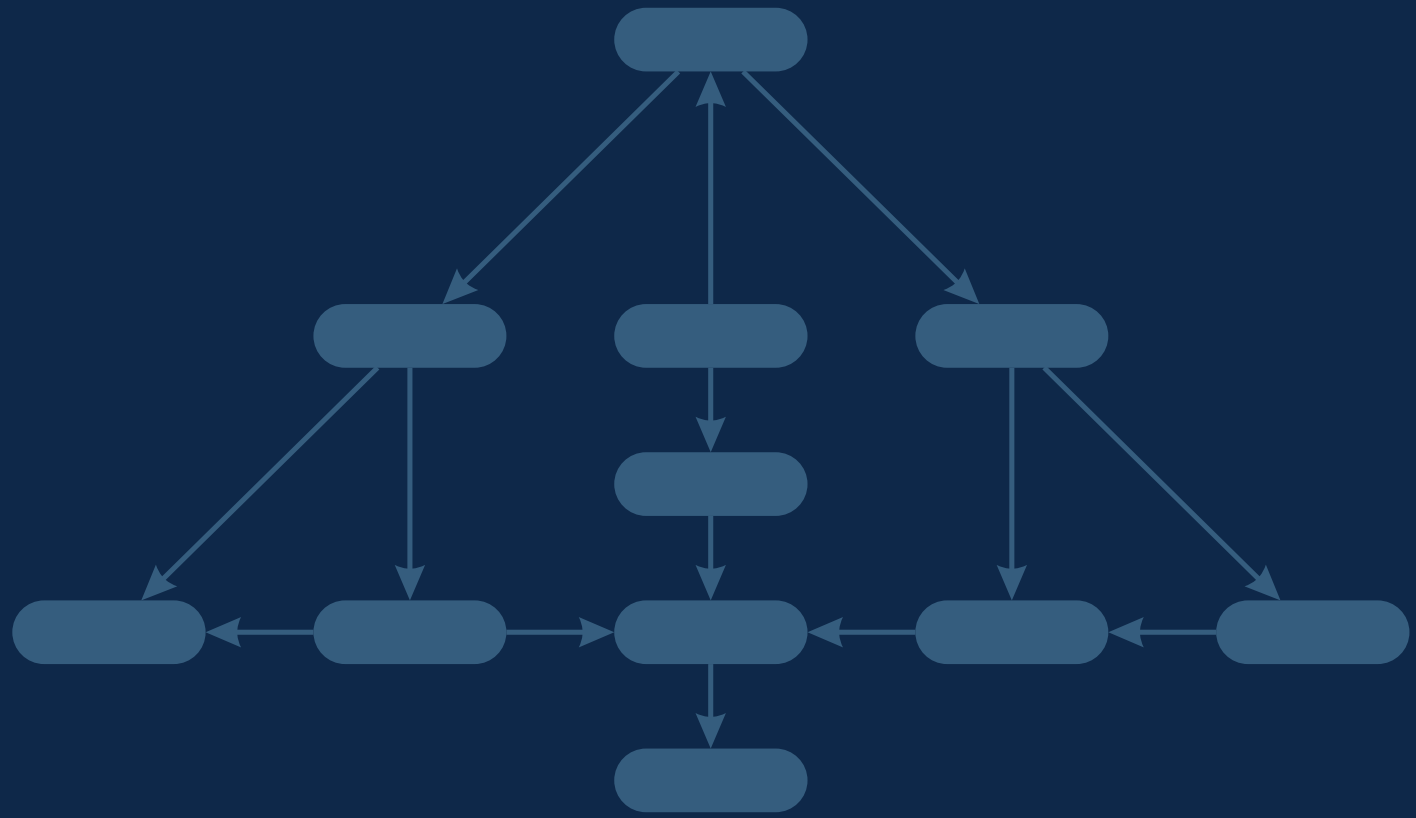
Objectives produce Requirements

Objectives deploy Resources and Resources have Objectives

Conclusions

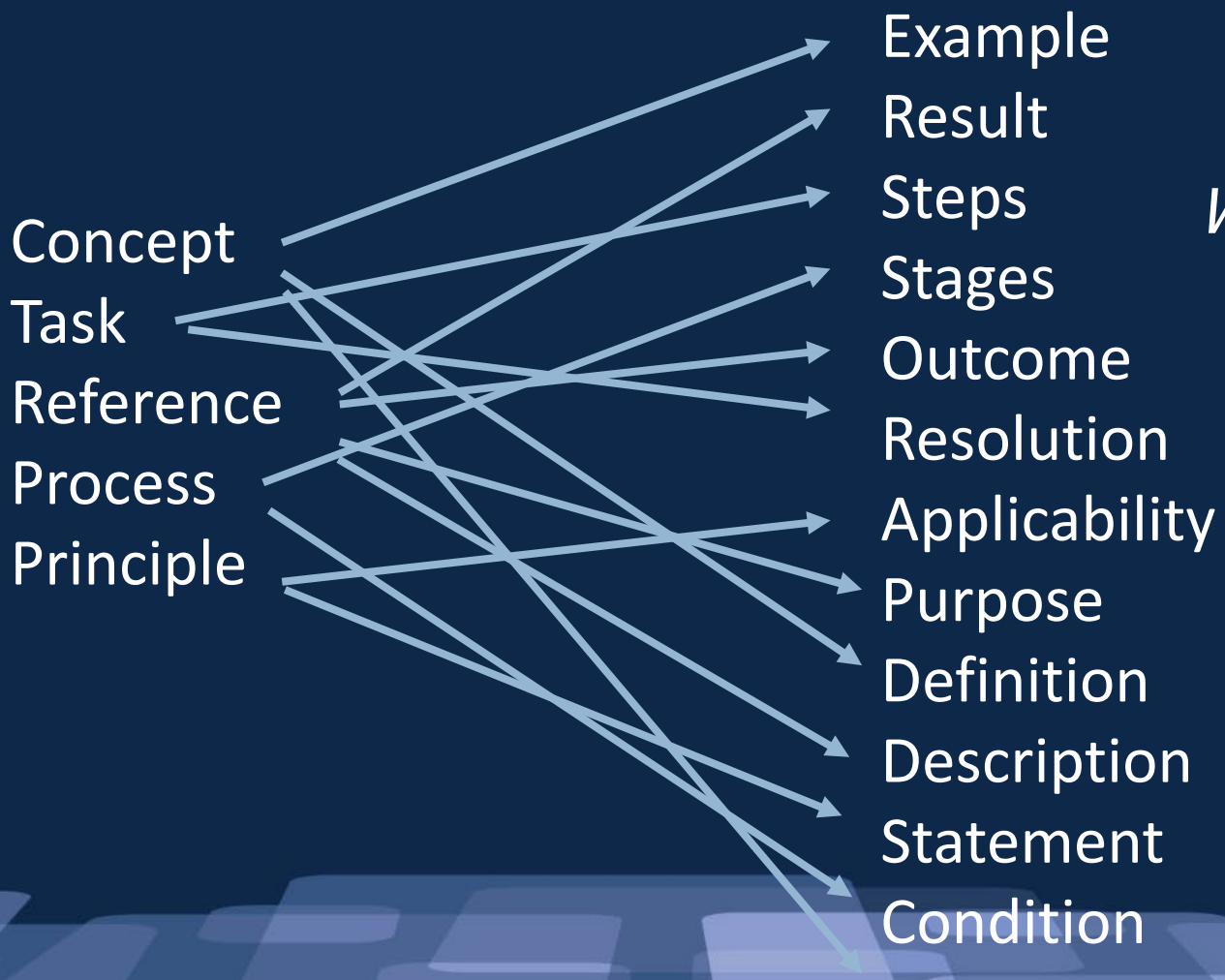
The Enterprise Content Metamodel organizes microcontent according to how it interacts with other information in the ecosystem

Understanding this traceability helps us to organize and prioritize relationships between different types of content pertaining to the same general subject



Information is what information does

Information typing informs intent



How do I … ?

What is a … ?

What are the … ?

Why do I … ?

How does the … ?

What happens when … ?

Who does … ?

When do I … ?

What does it look like?

What's the difference between …?

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Will Artificial Intelligence be the answer?

TIME
SPECIAL EDITION

Artificial Intelligence

The Future of Humankind

How will AI make sense of it all when we can barely make sense of it ourselves?

Cover: Special Edition of TIME Magazine
Editor: Nancy Gibbs, 2017

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Seamlessly shifting modalities

Voice to Online

Online to Virtual/AR

AR to Voice

Living in an omnichannel world

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CIDM
Our journey towards microcontent is simply the next step in the evolution of intelligent content needed to support true omnichannel delivery.
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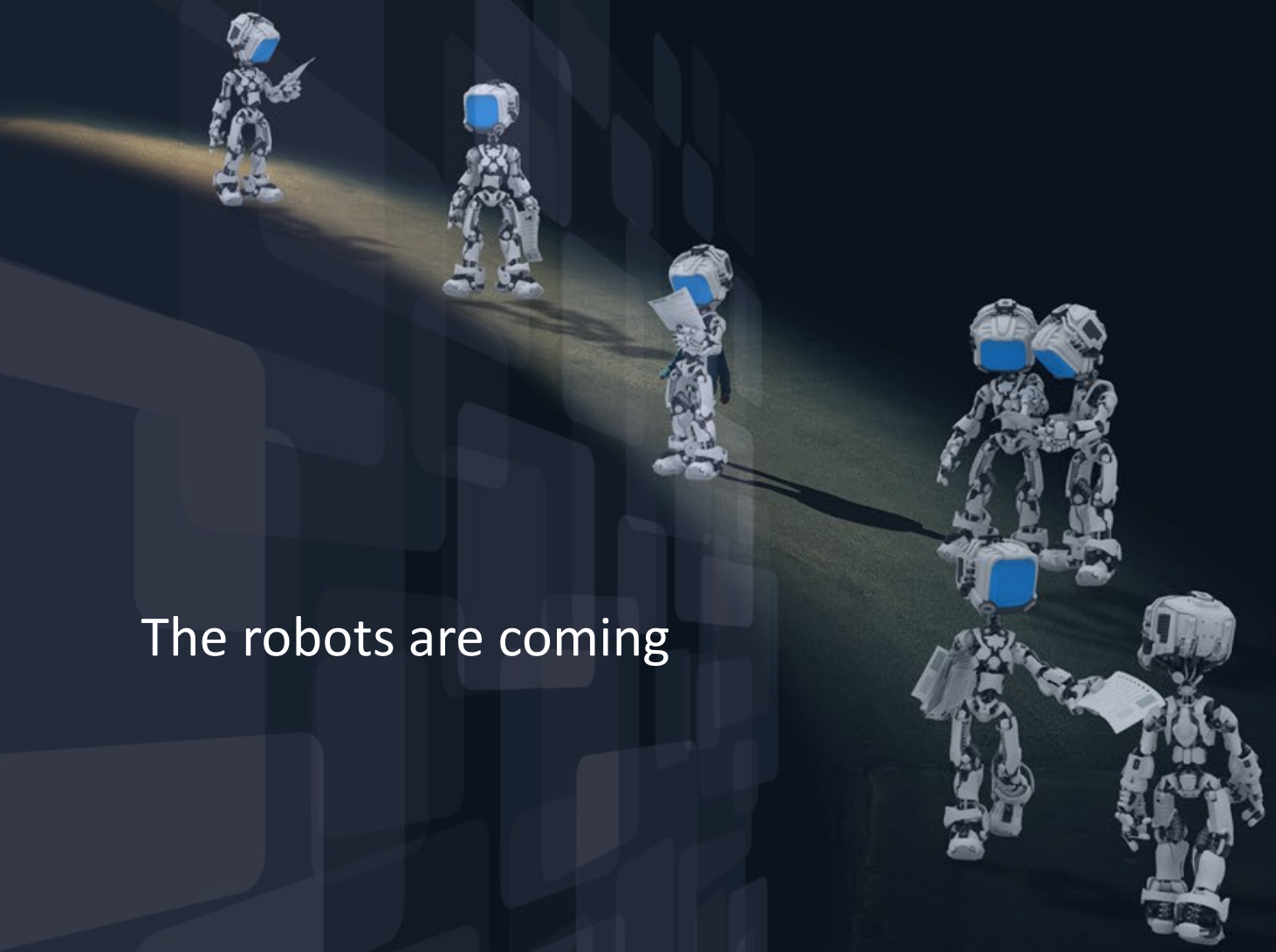

The robots are coming

We can either learn how to write for both bots and humans or miss out on a transformational opportunity for our profession.

DO YOU SPEAK ROBOT?

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Questions?

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Ask us about …

- Information Architecture
- Content Strategy
- Content Transformation
- Author Training
- Publishing Technologies

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