

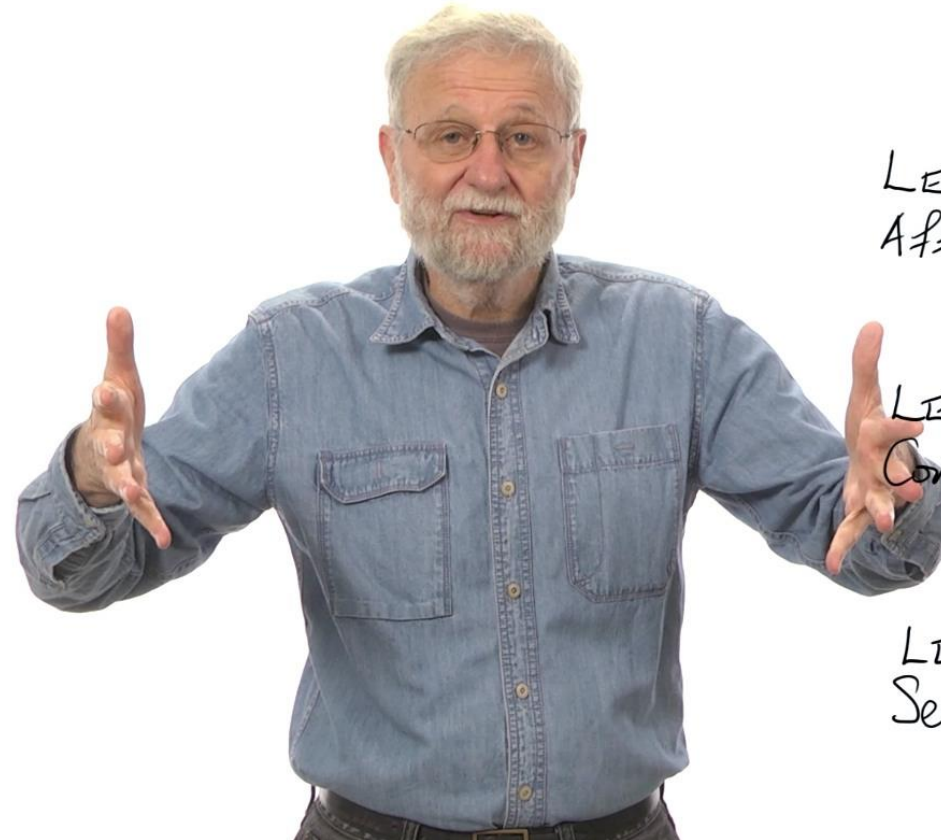
#05. Quality, standards, models



University of Bergamo
Master Course in Project and
Management of Tourism Systems
Academic Year 2021-2022
IT for Tourism Services



International
Organization for
Standardization



LESSON 1
Affordances & Signifiers

LESSON 2
Conceptual Models

LESSON 3
Seven Stages of Action

What are we talking about this time?



1. Evaluating quality?
2. Standards
3. Models
4. Rhetoric, journals & loci
5. The 7Loci meta-model
6. Models from a meta-model
7. Questions and measures

QUALITY

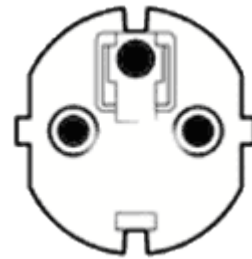


image credit to 123RF, Arketipo and Wikipedia

“Evaluating quality? Are you joking?”



This course’s syllabus states that we have to acquire “the ability to put into practice solid **models to evaluate the quality** of the **web presence** of destinations, businesses and tourism actors.”

Well... You might object that **quantity** can be evaluated because it’s **measurable**.
But quality?



Apparently, **quality** has **nothing to do** with processes like **evaluation**. It **cannot be measured**...
Are you sure?

Can we measure the **quality** of something like a relationship?



image credits to [Strategia PMI](#) and [12experiencelife.lifetime.life](#)

Standards



Think of electric **plugs** in different countries, **tension** (voltage) or **octanes** in gasoline, or... the **http**, the **html** themselves.

It's the measurable **quality** of these services that allows our **computers**, **cars** or **webpages** to work. Standards are **needed** for all services like these.

International **standards** are available for consideration and use, worldwide. They ensure **interoperability** among computers, cars, etc.

The most prominent global organisation in the field is the **International Organization for Standardization**, or **ISO**.



International
Organization for
Standardization

image credits to [sicurauto](#)

When standards are missing



A (NEMA 1-15 USA 2 pin)



B (NEMA 5-15 USA 3 pin)



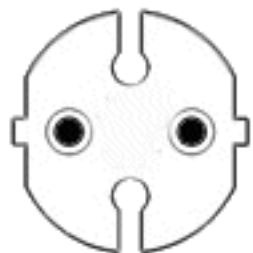
C (CEE 7/16)



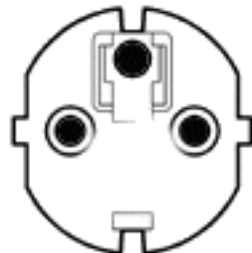
D (BS546 5 A version of Type M)



E (French)



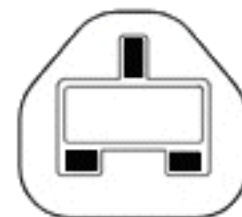
F (CEE 7/4 "Schuko")



G (BS1363 Fused 13 A,
5 A and 20 A also in common use)



H (SI 32 Israel)



I (AS-3112 Argentina /
Australia / New Zealand)



J (SEV-1011 Switzerland)



K (SRAF 1962/DB Denmark)



L (CEI 23-16 Chile / Italy)



M (15 A version of Type D BS546)



N Italy



O Denmark



P Israel

De jure vs. de facto standards



Some technology standards that are particularly relevant to our lectures – like the [html](#), [Bluetooth](#), or [Wi-Fi](#) – are [internationally recognized official standards](#).

[Wi-Fi](#) is in fact a set of standards, the creation of which involved an alliance among several companies like [Apple](#), [Samsung](#), [Cisco](#), [Microsoft](#), or [T-Mobile](#).

Being officially recognized, we can consider these standards as [de jure](#) standards.

Sometimes, however, standards exist [de facto](#), though no official agreement is reached about them. This was the case of the portable document format, or [pdf](#), developed by [Adobe](#) in the 1990s, and accepted as an [ISO](#) standard only in [2017](#).

The [Flash](#) platform for multimedia distribution, originally developed by [Macromedia](#) but later acquired and launched by – again – [Adobe](#), was also a popular de facto standard. But it was dropped before ever becoming de jure.

The strength of W3C (and Apple)



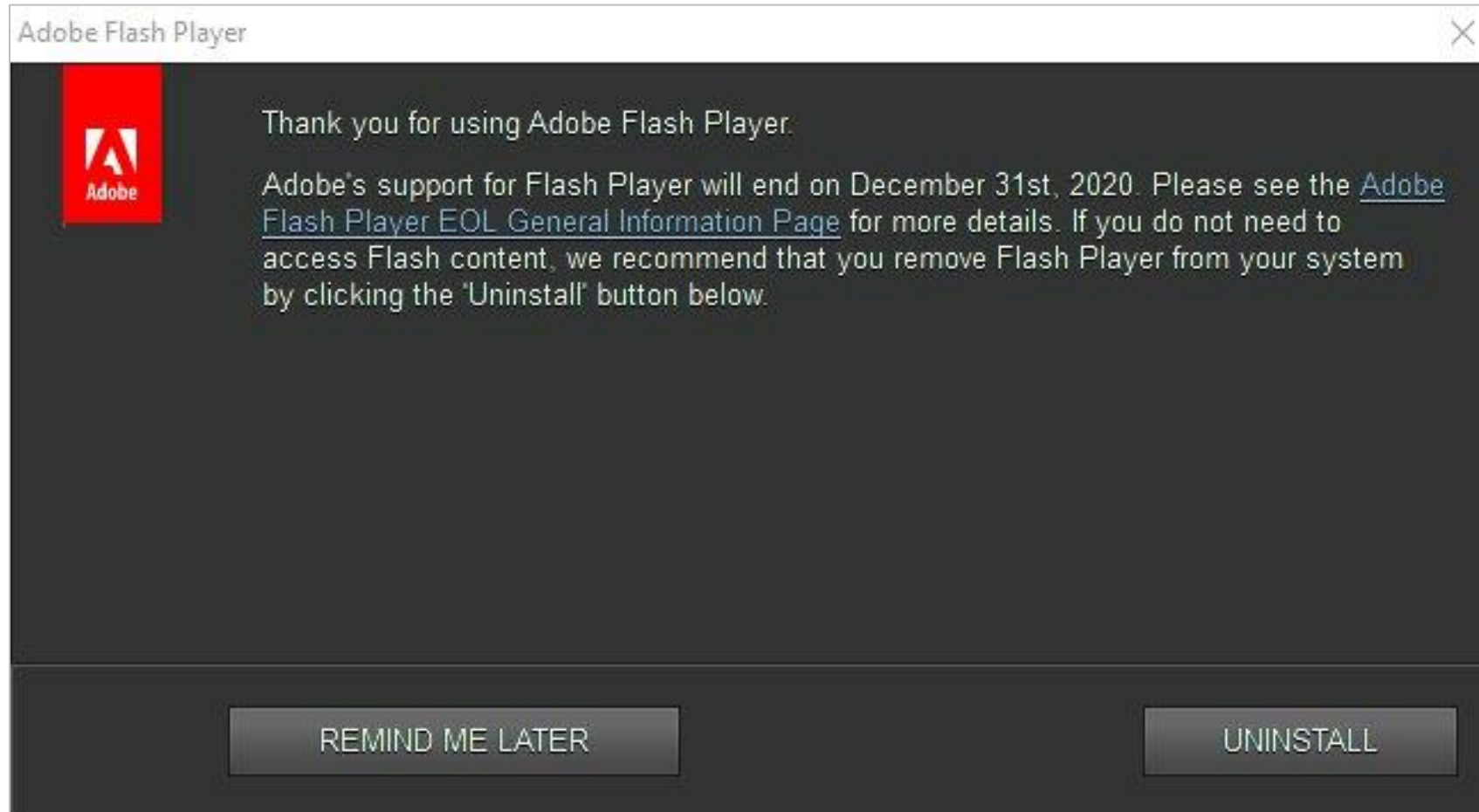
Several facts brought to drop the Flash *de facto* standard.

- In 2008 the W3C – the international community that develops open standards to ensure the growth of the Web – introduced *html5*, the fifth release of the html language.
- The same *multimedia functions* provided by *Flash*, a software that was proprietary and on payment, became manageable through *html5*, an open and free standard.
- In 2010 *Apple* decided that the *iPhone* would *not* support *Flash*.
- The *iPhone* was a *step forward* in *mobile* connections, and its diffusion was huge.

The stance taken by Apple – in practice by their co-founder and chief executive officer *Steve Jobs* – was essentially a *marketing move* against Adobe.

It wouldn't have been possible, however, hadn't W3C released a *de jure* standard.

Standards, too, change in time



After [html 5](#) was released as an open and free standard, [Flash](#) stopped being a de facto standard and became more and more redundant. Adobe itself stopped supporting its creature.

Is there any standard for quality?



If the existence of standards ensures interoperability – among computers, cars, webpages, electric plugs or pdf files, and perhaps even in relationships – a crucial question arises.

Is there any quality standard? Better. Does the ISO provide a definition of quality?



Yes. It does.



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Our first cornerstone



Here's the **ISO** original definition of quality.
This is the first cornerstone of the **evaluation method** we adopt.

**“Quality is
the totality of characteristics
of an entity
that bear on its ability to satisfy
stated and implied needs”.**

(ISO 8402)



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Standardization

A strong and clear definition



Several aspects of this definition deserve attention.

1. Every process has **needs** to be **fulfilled**.
2. Every entity has **own characteristics**: more than one, and all specific to the entity.
3. The **peculiar characteristics** of the entity **must all be considered**.
4. Everything dealing with the **fulfilment of needs** must be **considered**.
5. Not all the **needs** to be considered are **stated**.

Some of them must be searched for...

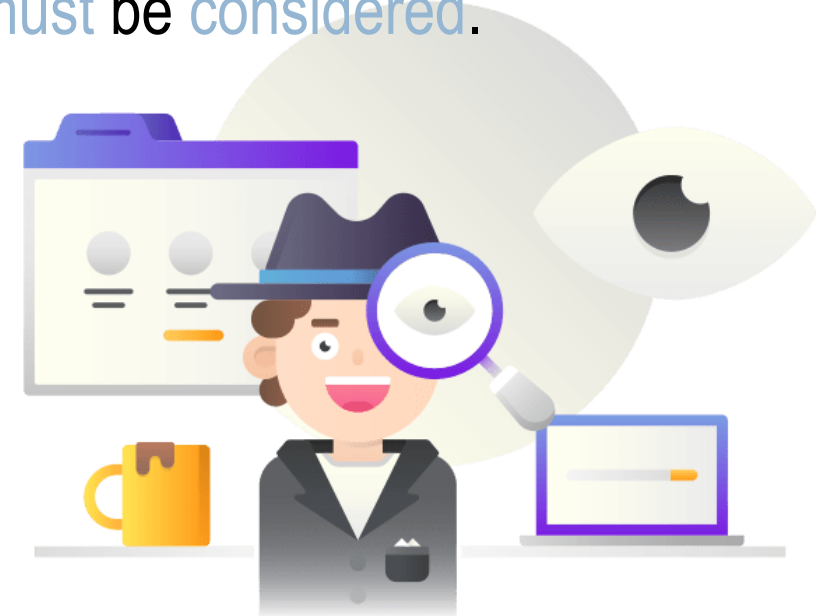


image credit to [pngkey.com](https://www.pngkey.com)

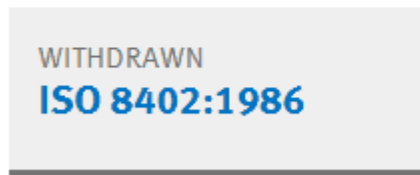
A left-over definition?



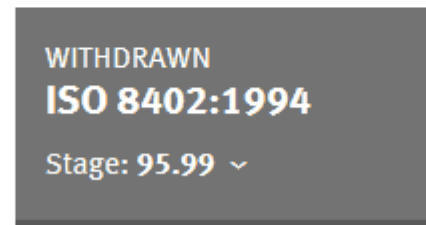
By the way, it is correct noting that the ISO does not use the 8402 as such any longer. The 8402 definition has been in fact absorbed into the **ISO 9000** family of international standards for **quality management systems**. The ISO 9000 specifies the terms and definitions that apply to **conformity assessments** of **production processes** or **services** and the like. As such, the 8402 was considered unable to deal with all the details.

LIFE CYCLE

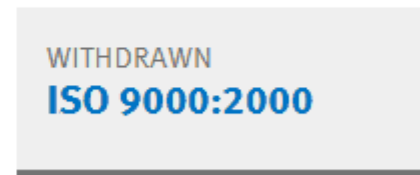
PREVIOUSLY



NOW



REVISED BY



Although less practical than “philosophical”, the 8402 still keeps all its **strength** and **clarity** in placing the basic **question** of quality.

image credit to <https://www.iso.org/standard/20115.html>, retrieved April 11, 2021

The method we're adopting



WEE-NET
Web Engineering Network
of Excellence

ALFA
EUROPEAN
ALFAS

Summer School in La Plata
January 29 February 9 2007

**Web Sites Quality Evaluation
Projects with the 7Loci method**

Luisa Mich
eTourism
etourism.economia.untn.it

UNIVERSITÀ DEGLI STUDI
DI TRENTO

The **ISO definition** of quality is the first of the two **cornerstones** of the quality evaluation **method** we're adopting.

Our method was proposed and has been developed at the **University of Trento**, Italy, on the initiative of a professor of physics, **Luisa Mich**.

The method is based on **models**, and a **meta-model**.

A model to evaluate quality?

image credit to Australian Entertainment Talent Agency

Models



Well... Admittedly, the word “model” may deserve disambiguation.

Yet, you might also ask **what** a “meta-model” is?

Let’s start with what a **model** is. “In the most general sense, a **model** is **anything** used in any way to **represent** anything else.” – Wikipedia, “Conceptual model”, 2012

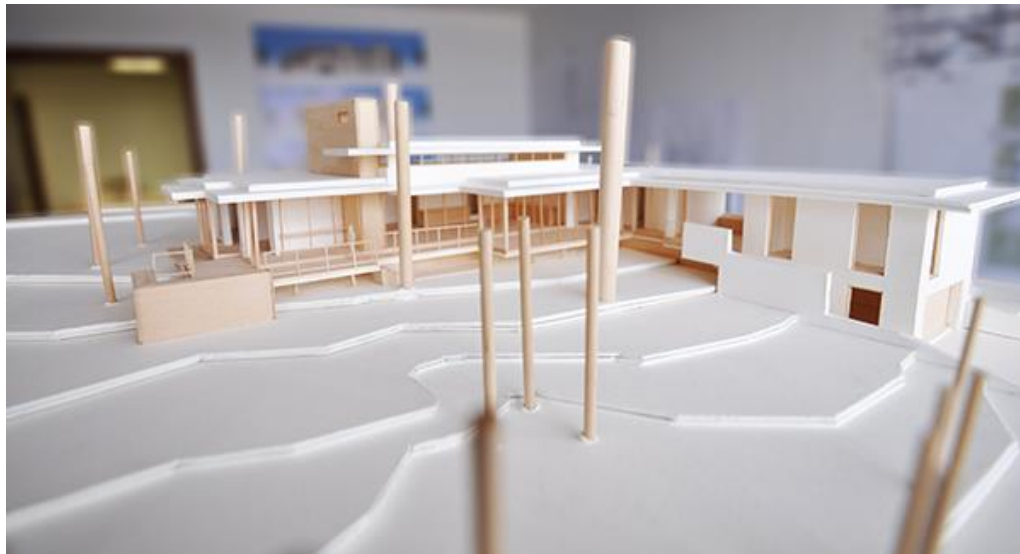


image credit to [Ponoko](#)



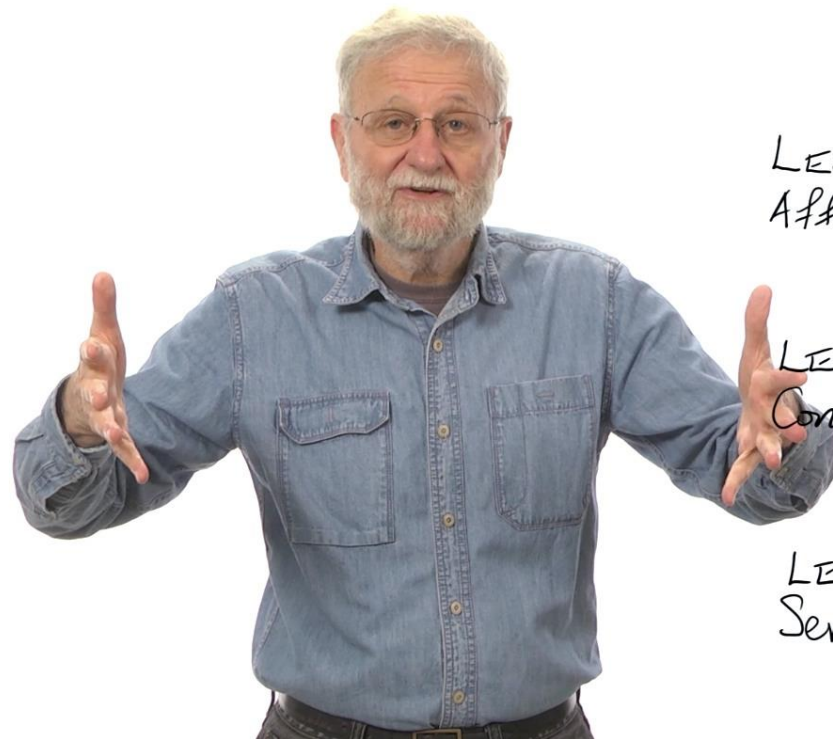
image credit to [Australian Entertainment Talent Agency](#)

Don Norman



Let's stick, however, to a more **simple** and **fitting definition**.

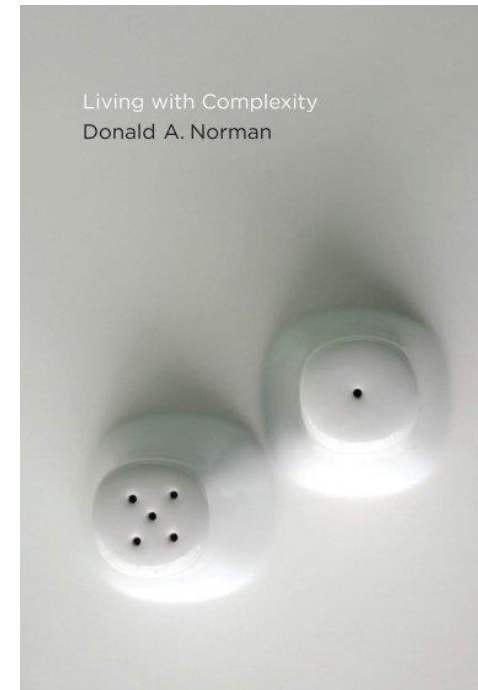
“A conceptual model is **the underlying belief structure** held by a person about **how something works**.” – Donald A. Norman, “Living with Complexity”, 2011



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Model means how something works



It was probably after reading “Living with Complexity” that someone at Wikipedia thought their definition of “Model” should be improved.

Now, October 2021, the definition of “Model” published at Wikipedia is the following.

“A conceptual model is a **representation of a system**. It consists of concepts used to **help people** know, **understand**, or simulate **a subject** the model represents. It is also a set of concepts. In contrast, physical models are physical objects, such as a toy model that may be assembled and made to work like the object it represents.

The term may refer to models that are formed after a **conceptualization** or **generalization process**. Conceptual models are often **abstractions** of things in the real world, whether physical or social. Semantic studies are relevant to various stages of concept formation. Semantics is basically about concepts, the **meaning** that thinking beings give to various elements of their experience.”

A model tells us what to do



If – by sticking to our previous examples – we have a clear **concept** of

- how we would be pleased to appear
- which building will result from our architectural design
- how to dress to meet our partners' expectations,

it means that we have a clear **model** of the procedure we should follow to reach a **result**.



image credit to Australian Entertainment Talent Agency



image credit to Arketipo

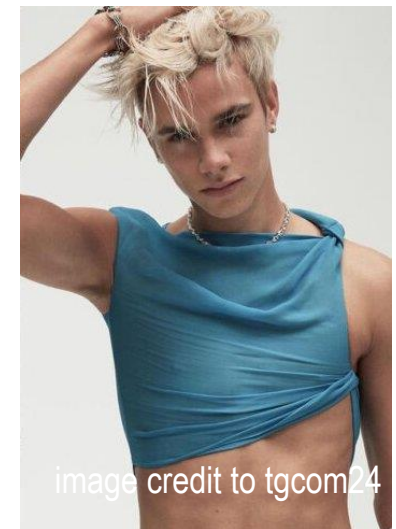


image credit to tgcom24

A meta-model is above models



Let's deal with meta-models, now, observing that specific **models** are more easily generated if we can rely on a **meta-model**.

To quote Wikipedia again, “A metamodel – or surrogate model – is **a model of a model**, and metamodeling is the process of generating such metamodels.

Thus metamodeling or meta-modelling is the analysis, construction and development of the **frames, rules, constraints**, models and **theories** applicable and useful for modelling a predefined class of problems.”

In other words, meta-models are **frameworks** which

- can be generated from models, and
- from which more models can be generated.



image credit to [lchars](#)

Meta

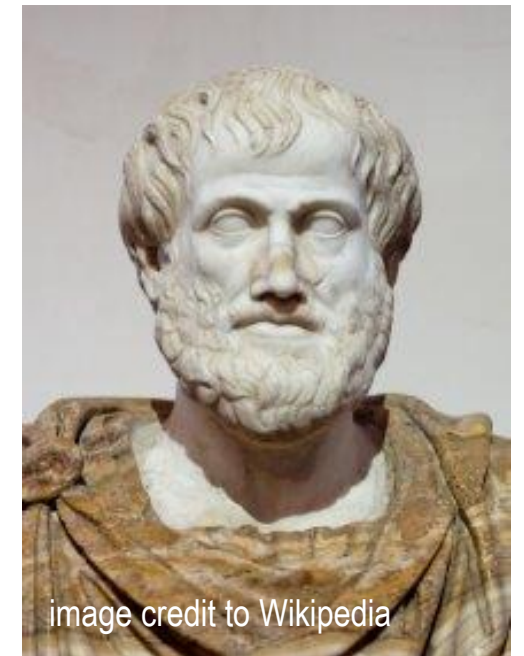


It's probably relevant to open a parenthesis here about the story of the prefix **meta** – meaning “beyond” or “at a higher level” – starting from the word **metaphysics**.

When **texts** left by **Aristotle** were collected and edited in the 1st century BC, his works dealing with **superior problems of human knowledge** – philosophy, substance, logic, entity... – were placed **beyond** those dealing with physics.

Aristotelian works about superior problems of human knowledge were placed by curator Andronicus of Rhodes **beyond** those about **physics**, in ancient Greek **μετά τα Φυσικά**.

From the Greek prefix **μετά** many words, as it often happens in western languages, have originated. Think of **metabolic** (brought forward), **metaphor** (carrying to an upper meaning level), **metamorphose** (trans-formation) or – in our case – **meta-model**.



Our meta-model from Trento



Our **7Loci** meta-model from Trento was originally called the **2QCV3Q** meta-model.

The reason of the original name comes from the **second cornerstone** of the method, which we will come across in a minute.

By the way, for those of you who can read Italian, our meta-model is properly described in chapter 8 of a handbook entitled “**Management e marketing delle destinazioni turistiche territoriali**”, published by McGraw-Hill in 2017.



Our second cornerstone. Roman rhetoric



In our 7Loci meta-model the ISO definition of quality is complemented by the **loci** from classical **rhetoric**. In Latin, the language spoken by ancient Romans, a **locus** is a place: a **semantic** place, too.

- **QVIS?**
- **QVID?**
- **CVR?**
- **VBI?**
- **QVANDO?**
- **QVOMODO?**
- **QVIBUS AVXILIIS?**
- **Who?**
- **What?**
- **Why?**
- **Where?**
- **When?**
- **How?**
- **By What Means?**

Hence the original name **2QCV3Q**.

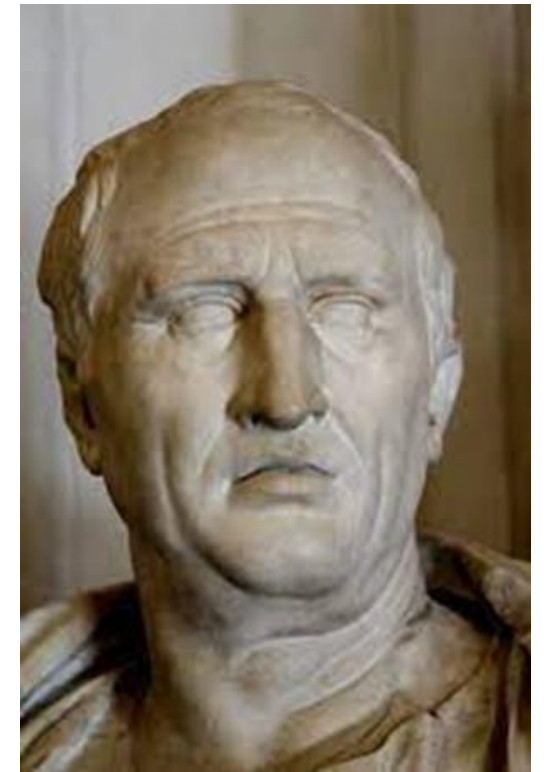


image credit to Wikipedia

English journalism



Please, take note. Five of the seven loci from the classical rhetoric exactly correspond to the **Five Ws**, or the **basic questions** an article must answer in English journalism.

- **QVIS?** (Who?)
- **QVID?** (What?)
- **CVR?** (Why?)
- **VBI?** (Where?)
- **QVANDO?** (When?)

Admittedly, Cicero was better than The Economist.

He also considered

- **QVOMODO?** (How?)
- **QVIBUS AVXILIIS?** (By What Means?)



image credit to mercatornet.com

Uhm... Isn't it an intriguing correspondence?



image credit to
mercatornet

How our brains work



If we answer these $5 + 2 = 7$ questions (the 7Loci) about an entity, we consider all (the “totality” of) meta-questions that our brain can conceive about the entity.

- **QVIS?** (Who?) > Which is the **identity** of our entity?
- **QVID?** (What?) > Which is its **substance**?
- **CVR?** (Why?) > Which are its **reasons**?
- **VBI?** (Where?) > Which is its **space**?
- **QVANDO?** (When?) > Which is its **time**?
- **QVOMODO?** (How?) > Which is its **behaviour**?
- **QVIBUS AVXILIIS?** (By what means?) > What can it **rely** on?



image credit to [VectorStock](#)

Meta-questions and questions



The seven general questions we're considering – and therefore we're thinking to answer – are **very general** indeed.

But what if we identify a **specific** entity, that is a specific field of analysis?

What if we start from our **method**, that is our meta-model, and **design** a set of specific **questions** to evaluate the **quality** of something or someone?

In doing so, we'll obviously have to consider the **needs** that something or someone must fulfil and the **tasks** something or someone is set to accomplish. All of them, and the **totality** of its/her/his characteristics.

- 7Loci (general) **meta-model** ↘
- 7Loci (specific) **model for a cake**, a **cook**, a **lecture**, a **lecturer**, a **web presence**

Let's try. Perhaps joking... But not too much, after all.

7 Loci questions about a cake



Can you place questions in order to evaluate the quality of every characteristic of this birthday cake? Are all the involved needs fulfilled?

- **Who?**
 - **What?**
 - **Why?**
 - **Where?**
 - **When?**
 - **How?**
 - **By What Means?**
- People in the party
 - Flavour, perhaps wine
 - Wish a happy birthday
 - In a friendly place
 - A birthday evening
 - Eating & enjoying
 - A table, a knife, forks



7 Loci questions about a cake's cook



Yet, there are other questions that might be asked in order to evaluate the quality of a birthday cake. For instance, are all the cook's needs fulfilled?

- **Who?**
 - **What?**
 - **Why?**
 - **Where?**
 - **When?**
 - **How?**
 - **By What Means?**
- Is her personality clear?
 - Good ingredients?
 - Is she appreciated?
 - Is her reputation shown?
 - Is the cake still fresh?
 - Do party members enjoy?
 - Were cooking tools ok?

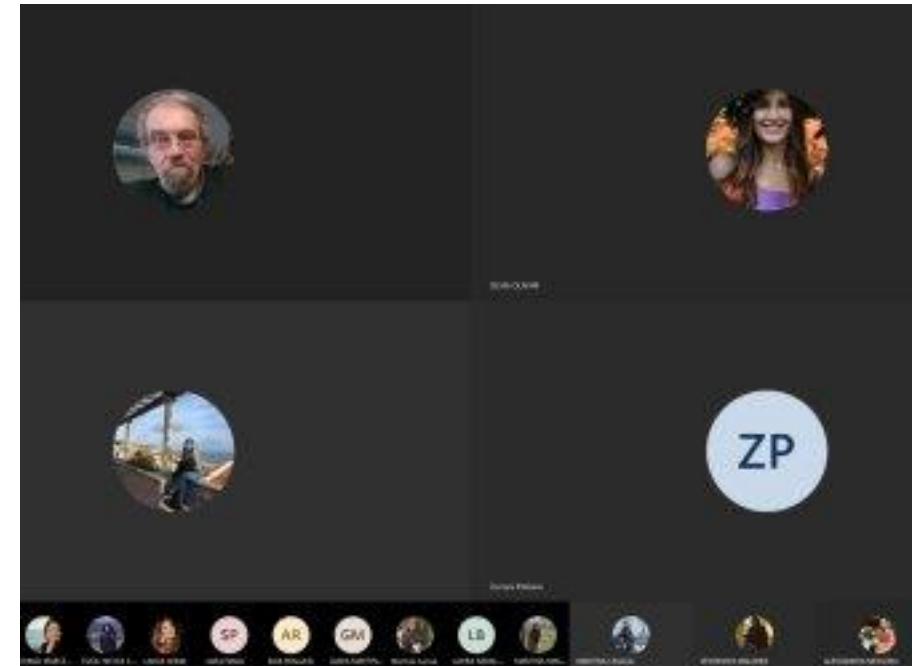


7Loci questions about this lecture



Can you evaluate the quality of every characteristic of this lecture I'm holding? Are all your (and my) individual needs fulfilled?

- **Who?**
 - You, me
- **What?**
 - The content we share
- **Why?**
 - Make you think and react
- **Where?**
 - In a class – virtual, too
- **When?**
 - Right now
- **How?**
 - Talking & viewing
- **By What Means?**
 - A room and a platform



7Loci questions about your lecturer



Can I place questions to myself in order to evaluate the quality of my management of this lecture? Are all my individual needs fulfilled?

- **Who?**
 - **What?**
 - **Why?**
 - **Where?**
 - **When?**
 - **How?**
 - **By What Means?**
- Am I a teacher for real?
 - How's my content?
 - Am I making you think?
 - Is virtual too poor?
 - Are my talks too long?
 - Are my words clear?
 - Do I like Teams?



But what if the entity is a web presence?



The 7Loci meta-model – based on the ISO definition of quality and classical rhetoric loci – can be given a naming which is useful to evaluate the quality of a web presence.

- QVIS? (**Who?**) **Identity**
- QVID? (**What?**) **Content**
- CVR? (**Why?**) **Services**
- VBI? (**Where?**) **Individuation**
- QVANDO? (**When?**) **Maintenance**
- QVOMODO? (**How?**) **Usability**
- QVIBUS AVXILIIS? (**By what means?**) **Feasibility**
- Is the web presence identifiable?
- Which is its substance?
- Which are its reasons?
- Which is its space?
- Which are its times?
- Which is its behaviour?
- What can it rely on?

The web presence of a touristic entity?



Ok. Now, in our own tourism terms, can we take the 7Loci meta-model and propose models to evaluate the quality of

- the web presence of a hotel?
- the web presence of a destination?
- the web presence of an event involving tourism?

Why not?

Let's try to figure out which questions could fulfil tasks like these.



image credit to infinityimmigration.com, BC, Canada

7 Loci meta-questions for a touristic entity

We have identified a **quality** standard and seven **meta-questions** to complement it.
We've seen that we can ask these questions to evaluate the quality of a **web presence**.
We're coming now to the **key point** in **our syllabus**: the web presence of a **touristic entity**.

- **Who?** > Does the web presence we consider **identify the entity** it represents?
- **What?** > Does it provide tourists with the **content** they need?
- **Why?** > Does it provide tourists with the **services** they need?
- **Where?** > Are its official and semi-official spaces **found in the Web**?
- **When?** > Does the web presence consider that the **times** they are a-changing?
- **How?** > Does it **behave properly** when tourists come across it?
- **By what means?** > Does it rely on **sufficient resources**?



What about measuring?



Questions like these can be organized in a proper questionnaire, which may be useful to measure the results of a quality evaluation.

You can count positive and negative answers to the questions that you've decided to ask along your evaluation.

You can even produce scores among the web presence of different comparable entities: cakes, cooks, lectures, lecturers, or the web presence of destinations, tourism businesses, actors or events.

Identity	quis?	who
Website Brand	<input type="checkbox"/>	Does the website clearly show an identity ?
Destination Image	<input type="checkbox"/>	Does the website clearly identify what sort of tourism can be performed in the destination?
Destination Geographical Position	<input type="checkbox"/>	Does the website clearly identify where the destination is?
Graphic Design	<input type="checkbox"/>	Does the website have a suitable graphic layout ?
Personalization	<input type="checkbox"/>	Does the website promise to provide different content for different targets ?

Identity .. Quis? .. Who?

Website brand	<input type="checkbox"/>	Does the website clearly show an identity ?
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Management .. Quando? .. When?

Code compliance	<input type="checkbox"/>	Does the website's software work?
Update	<input type="checkbox"/>	Does the website appear to be regularly updated?
Links Compliance	<input type="checkbox"/>	Do all of the links work?
Technologies	<input type="checkbox"/>	Is the website technologically updated?

Management	quando?	when
Code Compliance	<input type="checkbox"/>	Does the website's software work?
Update	<input type="checkbox"/>	Is the website regularly updated?
Links Compliance	<input type="checkbox"/>	Do all of the links work?
Technologies	<input type="checkbox"/>	Is the website technologically updated?

Usability	quomodo?	how
Menu	<input type="checkbox"/>	Is the navigation easy and clear?
Full Text Research	<input type="checkbox"/>	Is an internal search engine provided? Does it work properly?
Site Map	<input type="checkbox"/>	Is there a site map ?
Download Time	<input type="checkbox"/>	Does the homepage appear in less than five seconds ? [*]
Cultures	<input type="checkbox"/>	Does the website provide different editions in different languages ?
Cultures Compliance	<input type="checkbox"/>	Are the different editions really in different languages? Is the content completely located?
Language & Icons	<input type="checkbox"/>	Does the website use clear and sufficient icons and language?
Hardware & Software Compliance	<input type="checkbox"/>	Mark "yes" if no special plugin is needed.
Impaired users	<input type="checkbox"/>	Are impaired users considered ?

[*] according to [pinodoom](#)

Boolean answers



In fact, if you want to provide a measurable result, the best way to do so is count the number of positive vs. negative answers – the True vs. the False – that each entity deserves, according to a robust quality evaluation method and its specific questions asked.

1/0

Yes/No

True/False

It's the same condition that you find in some different sports.

You have sports where results are objectively measurable (in a 100-meter run race, for instance, the winner is recorded by a photo finish device), and you have sports where results can only be decided by a jury (in figure skating, for instance, no objective measurement is possible). But juries are objectionable!

This is called
a Boolean
Data Type.

Measuring is different from judging



You may well come across situations where you actually have to measure quality in Boolean terms.

1/0

Suppose, for instance, that you have to decide which among several competing web agencies should be commissioned to build – or improve – your destination’s (or business’s, or actor’s, or event’s) web presence.

Yes/No

If this is the case, you are compelled to provide undisputable evidence that one agency, and one only, is proposing the best.

True/False

Taxpayers’ money is at stake. You have to be transparent and objective. The only possible choice is measuring the quality of the competing projects. Only a countable result is ok.

Measured sports vs. judged sports



image credit to swisstiming.com



image credit to Il Post

Boolean data?



Do you have to provide Boolean data?

No. You do not have to provide Boolean data in this course.
You're not requested to build and fill a questionnaire.

What you are requested to do is consider all the questions that should be reasonably asked during the evaluation of the quality of an entity – the web presence of a destination or a tourism business, actor or event in our case – according to the 7LocI method.

Your conclusions, whether or not they have been measured in Boolean data, will certainly contribute to identify the challenges that the web presence of an entity – a destination or a tourism business, actor or event in our case – has to face.

1/0

Yes/No

True/False

Key points

1. Quality? Are you sure?
2. Rules to make things work
3. Knowing what to do
4. Cicero and The Economist
5. Our method
6. Coming to the point
7. Questionnaires and scores

image credit to Australian Entertainment Talent Agency