

TEI customization



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This session

- What is TEI customization?
- Why should we bother with customizing the TEI
- How do we customize the TEI

What is TEI customization?

Ask yourselves:

- Are you using all the elements in the TEI?
- Many elements can encode the same phenomena — how do you ensure consistency?
- Many people might be encoding texts for your project — how do you ensure consistency?
- What about that very particular textual phenomena that you have in your text that is not covered by the TEI — how do you record it?

What is TEI customization?

Sure, you can just write an extensive manual to go along with your project, but

- Why are you duplicating work?
- People make mistakes!
- What about people wanting to use your data?
- How do you make sure your files are valid according to your own rules?

Surely there must be a better way...

What is TEI customization?

- Tailoring the TEI to fit the needs of your project
- Making sure your rules are understood by both people and machines
- Making sure your rules are consistently applied
- Making sure your data can be reused by others

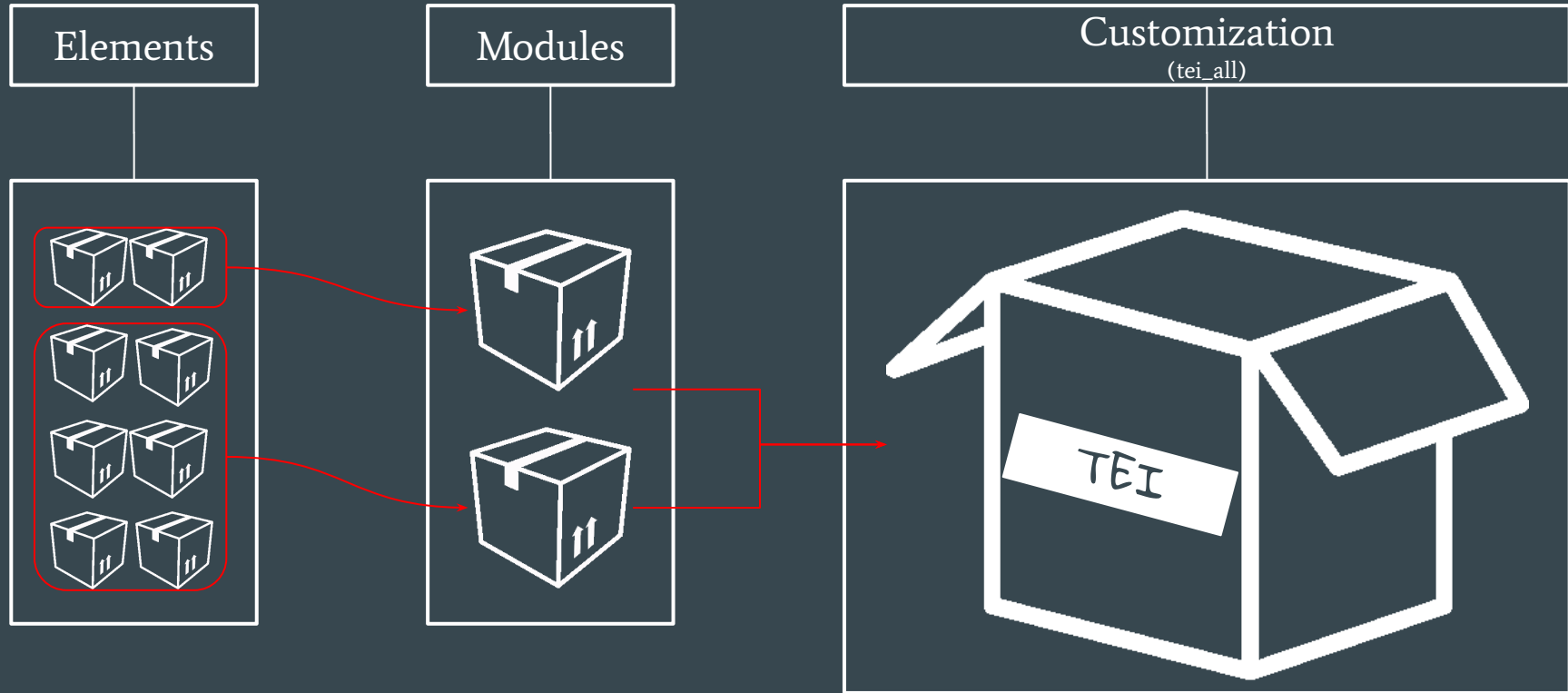
How can you make sure of this?

What is TEI customization?

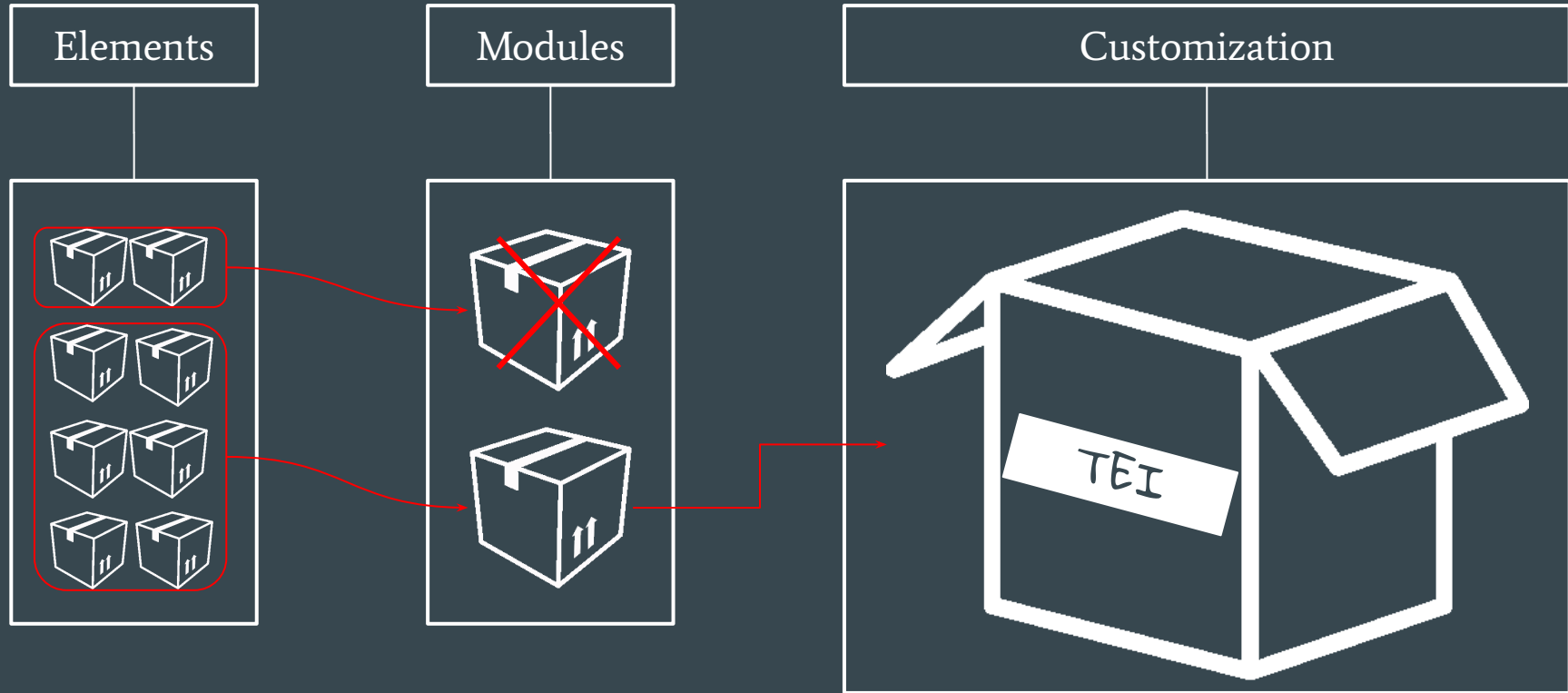
You have always been using a customization of the TEI:

- TEI_all → contains all the elements with all corresponding attributes, the whole package
- TEI_lite → a simplified general purpose customization, designed cater for ‘90% of the needs of 90% of the TEI user community’
- TEI_bare → the bare minimum of elements to create a valid TEI document
- There are also a couple of prefab thematic customizations:
 - TEI_corpus → for linguistic corpora
 - TEI_MS → for manuscript description
 - TEI_drama → for dramatic text
 - ...

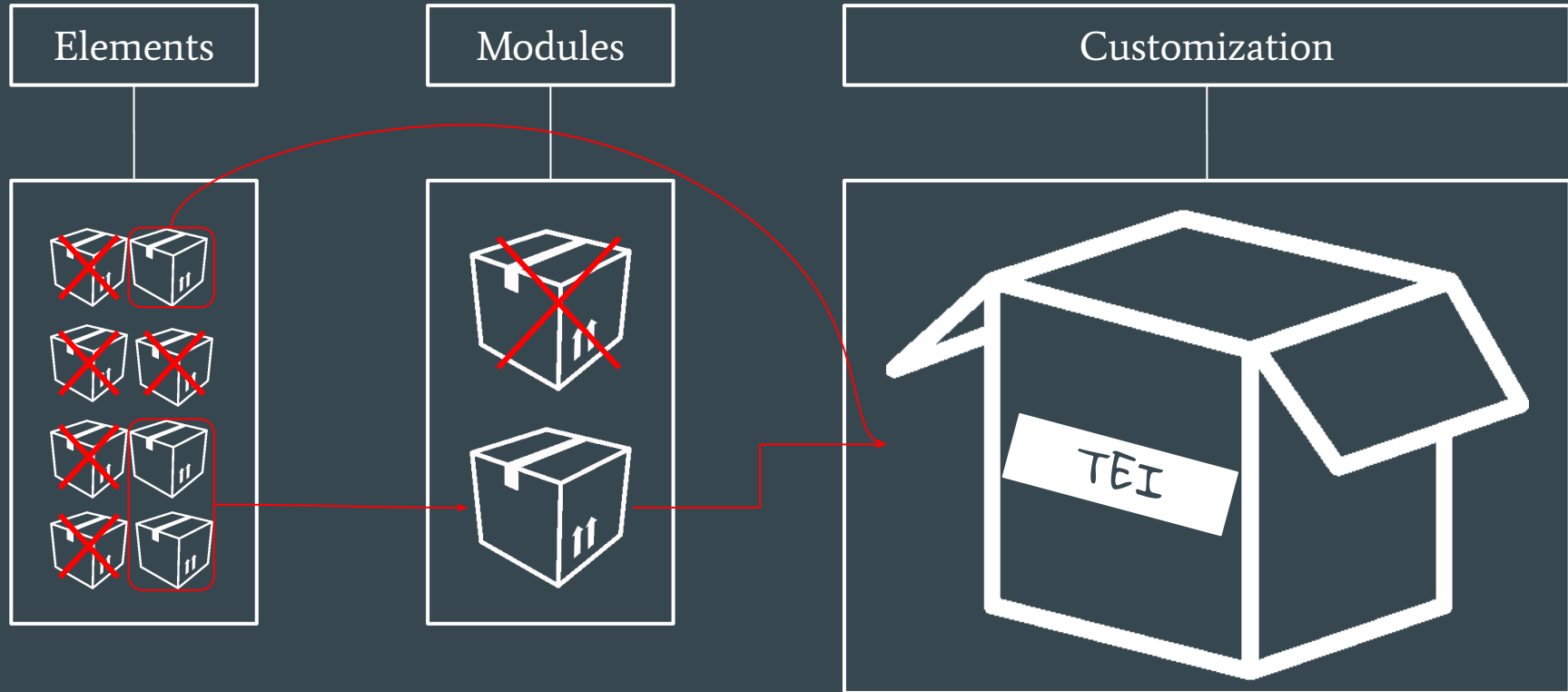
What is TEI customization?



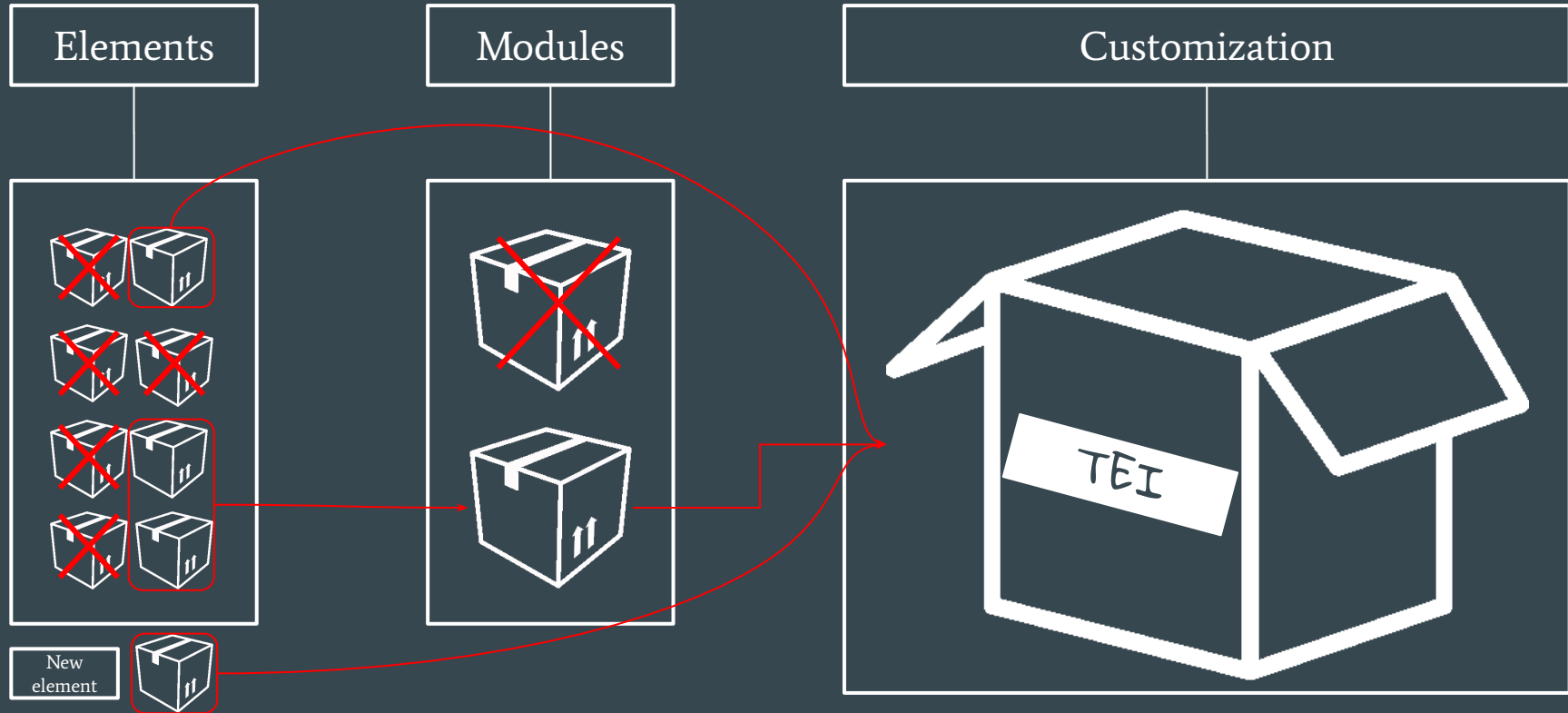
What is TEI customization?



What is TEI customization?



What is TEI customization?



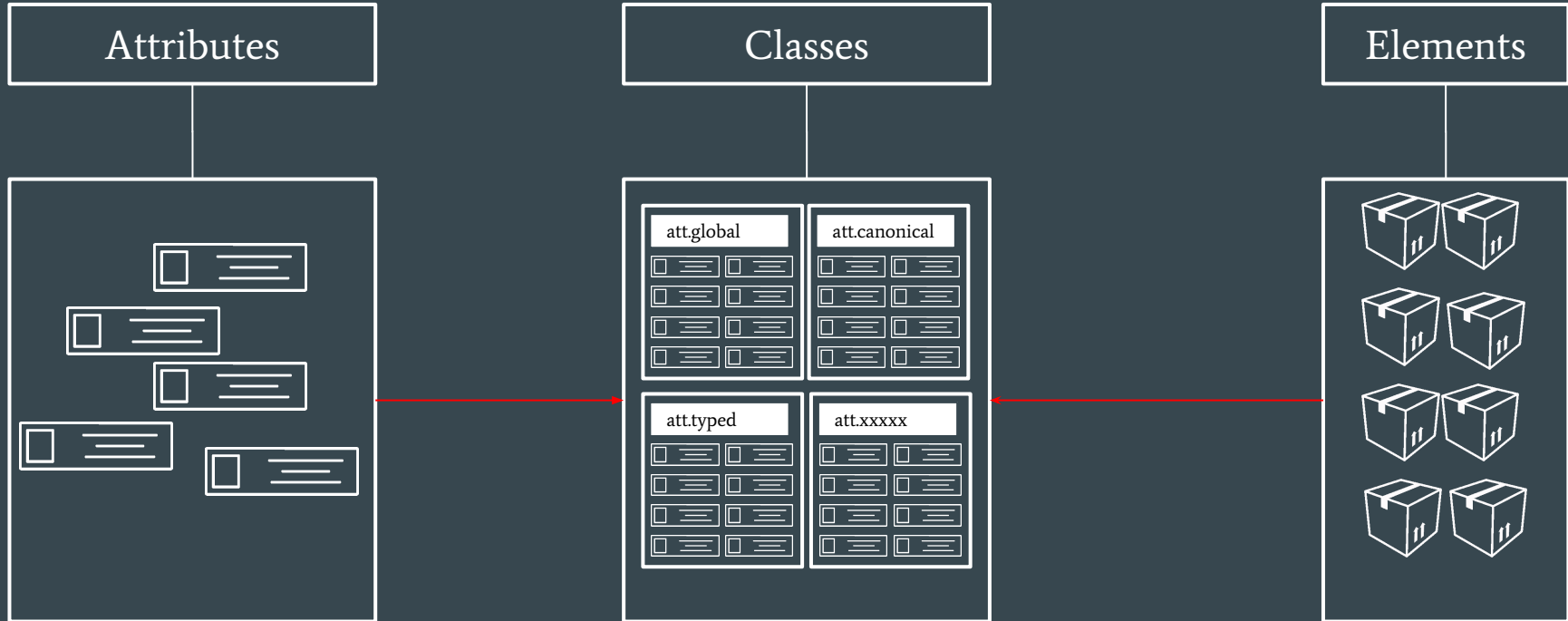
What is TEI customization?

In creating a new TEI customization, you can:

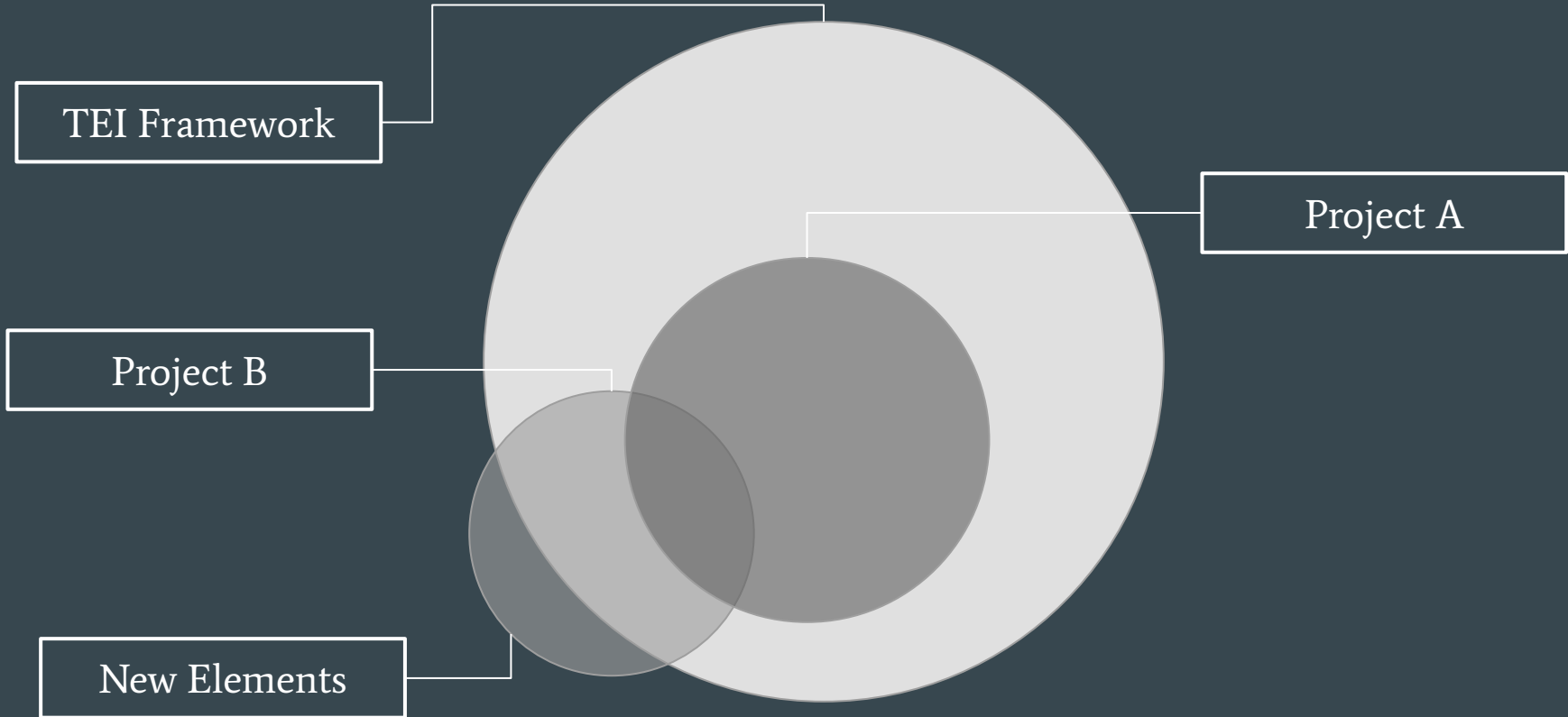
- Include modules as a whole
- Exclude modules as a whole
- Include individual elements
- Exclude individual elements
- You can, by:
 - Creating new elements
 - Changing existing elements
 - Creating new attributes
 - Changing existing attributes



What is TEI customization?



What is TEI customization?



How do you define a customization

TEI customizations are defined by ODD documents

- ODD stands for ‘One Document Does it all’
- An ODD is itself a TEI document
- An ODD contains:
 - Descriptive prose
 - Examples
 - Formal declarations for the components of the TEI abstract model
- The TEI Guidelines are ODD!

How do you define a customization

With an ODD document you can:

- Generate a schema
 - A schema is a set of instructions that software can use to validate an xml document
 - A schema can be expressed in several schema languages:
 - RELAX NG (compact syntax)
 - RELAX NG (xml syntax)
 - W3C Schema
 - ...
- Generate documentation
 - Documentation is human-readable and can, therefore, be expressed in a series of formats, including:
 - TEI itself
 - PDF
 - HTML
 - ...

ODD

What does an ODD document look like?

- Pretty much like any other TEI document, except it **must include**:
 - <schemaSpec> —> element that defines a TEI conformant schema
 - Children elements such as <moduleRef> specifying what must be included, excluded, added or changed

```
<teiHeader>
  <!-- METADATA -->
</teiHeader>
<text>
  <body>
    <p>Descriptive text here</p>

    <schemaSpec ident="tei_bare_example" xml:lang="en">
      <moduleRef key="core"
        include="p list item label head author title"/>
      <moduleRef key="tei"/>
      <moduleRef key="header"
        include="teiHeader fileDesc titleStmt publicationStmt sourceDesc"/>
      <moduleRef key="textstructure"
        include="TEI text body div front back"/>
    </schemaSpec>
  </body>
</text>
```

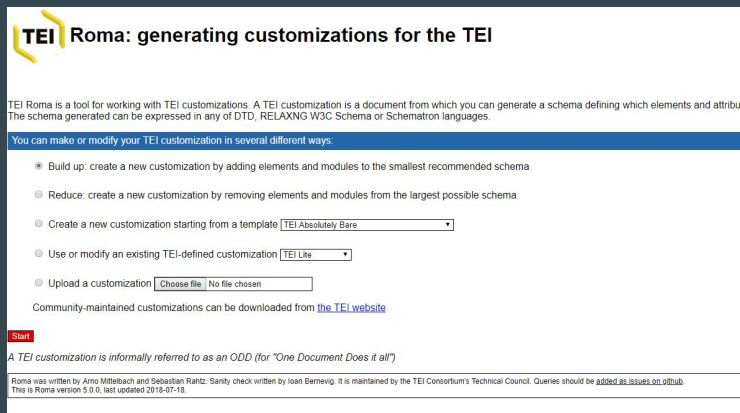

How do you define a customization

Do I need to learn how to write an ODD?

- No!
 - (unless you want granular control of your customization)
 - (although you should at least have a reading understanding of one)
- So... how?

How do you define a customization

There are currently two online tools to help you build an ODD:



TEI Roma: generating customizations for the TEI

TEI Roma is a tool for working with TEI customizations. A TEI customization is a document from which you can generate a schema defining which elements and attributes. The schema generated can be expressed in any of DTD, RELAXNG W3C Schema or Schematron languages.

You can make or modify your TEI customization in several different ways:

- Build up: create a new customization by adding elements and modules to the smallest recommended schema
- Reduce: create a new customization by removing elements and modules from the largest possible schema
- Create a new customization starting from a template: TEI Absolutely Bare
- Use or modify an existing TEI-defined customization: TEI Like
- Upload a customization: Choose file No file chosen

Community-maintained customizations can be downloaded from [the TEI website](#)

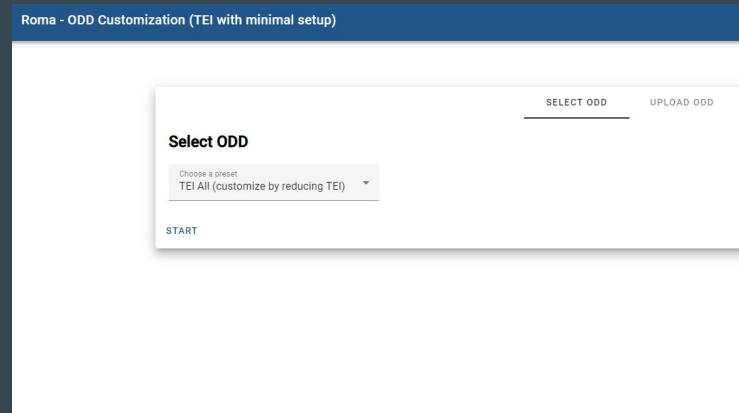
[Start](#)

A TEI customization is informally referred to as an ODD (for "One Document Does it all")

Roma was written by Arno Mittetbach and Sebastian Rahitz. Sanity check written by Ioan Bernevig. It is maintained by the TEI Consortium's Technical Council. Queries should be added as issues on GitHub. This is Roma version 5.0.0, last updated 2018-07-18.

TEI Roma

- Currently in version 5.0
- Old interface
- Module-oriented



Roma - ODD Customization (TEI with minimal setup)

[SELECT ODD](#) [UPLOAD ODD](#)

Select ODD

Choose a preset
TEI All (customize by reducing TEI)

[START](#)

RomaJS

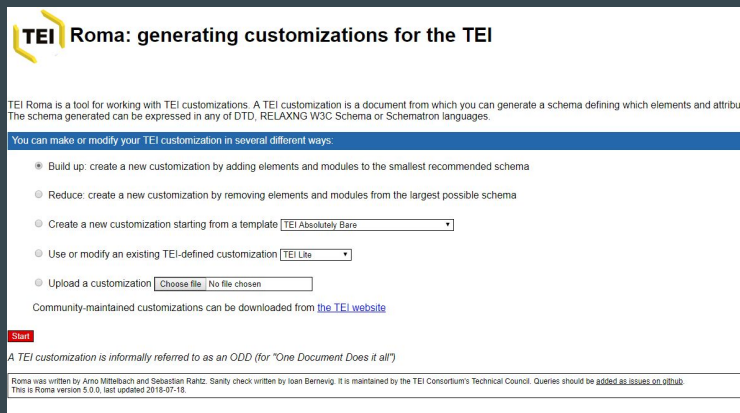
- Currently in beta
- New interface
- Element-oriented

Customizing — preparation

1. Open two tabs in your browser
 - a. One with TEI Roma (<https://roma2.tei-c.org/>)
 - b. The other with RomaJS (<https://mith.us/romajs/>)
2. Open Oxygen
 - a. But don't create any new TEI or XML document.

Customizing — starting

In both cases, you begin by choosing a starting ODD from a list (or uploading your own)



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TEI Roma is a tool for working with TEI customizations. A TEI customization is a document from which you can generate a schema defining which elements and attributes the schema generated can be expressed in any of DTD, RELAXNG W3C Schema or Schematron languages.

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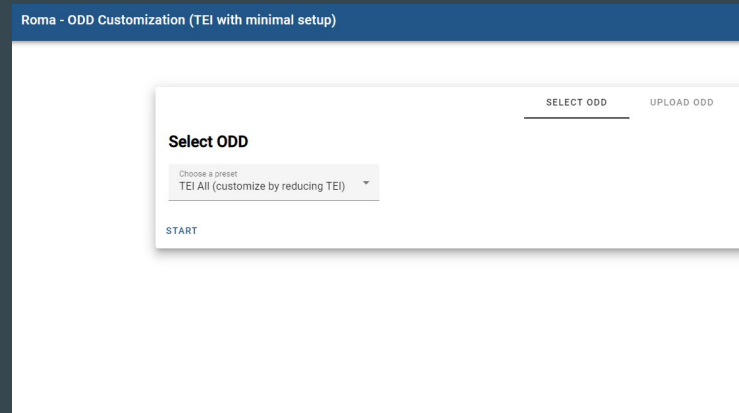
- Build up: create a new customization by adding elements and modules to the smallest recommended schema
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- Create a new customization starting from a template: **TEI Absolutely Bare**
- Use or modify an existing TEI-defined customization: **TEI Like**
- Upload a customization: **Choose file** | No file chosen

Community-maintained customizations can be downloaded from [the TEI website](#)

Start

A TEI customization is informally referred to as an ODD (for "One Document Does it all")

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Roma - ODD Customization (TEI with minimal setup)

Select ODD

Choose a preset
TEI All (customize by reducing TEI)

START

For our example, we are ‘building up’, so we’ll select that option in both Roma and RomaJS

Customizing — metadata

The first step is to add some metadata to our ODD

TEI Roma: generating validators for the TEI

Set your parameters

[New](#) [Customize](#) [Language](#) [Modules](#) [Add Elements](#) [Change Classes](#) [Schema](#) [Documentation](#) [Save Customization](#)

Set your parameters

Title

Filename

Namespace for new elements

Prefix for TEI pattern names in schema

Language

☒ English,
 ☐ Deutsch,
 ☐ Italiano,
 ☐ Español,
 ☐ Français,
 ☐ Portugues,
 ☐ Russian,
 ☐ Svenska,
 ☐ 日本語,
 ☐ 中文

Author name

Description

[Save](#)

Roma was written by Arno Mittelbach and Sebastian Rahtz. It is maintained by the TEI Consortium's Technical Council. Queries should be [added as issues on github](#).
This is Roma version 5.0.0, last updated 2018-07-18. Using TEI P5 version 3.5.0

Roma - ODD Customization (TEI Workshop Example)

Title
The title of this customization: TEI Workshop Example

Identifier
The identifier of this customization. This will also be the filename of the ODD and schemata on export. tei_workshop_example

Customization Namespace
This is the default XML namespace for new elements you create. http://www.example.org/ns/nonTEI

☒ Apply to new attributes as well.

Prefix
The prefix for pattern names in the schema. tei_w_e

Language of elements and attributes
When element and attributes support multiple languages, choose this one. English

Documentation Language
Documentation will be shown and generated in this language. English

Author
Who created this customization: TSG

These are pretty much similar in both apps, so we can do them simultaneously

Customizing — metadata

The fields are:

- Title → a title for your customization
 - In our example our title will be ‘TEI Workshop Example [Roma| RomaJS]’
- Filename | Identifier → a filename and identifier for our customization
 - `tei_workshop_example`
- Namespace → namespace guarantees that no two elements can share the same name.
 - `http://www.example.org/ns/nonTEI`
- Prefix → In case we use non-TEI XML schema, the prefix is appended to any of the elements with the same name
 - `tei_w_e_`
- Author → self-explanatory
 - TSG
- Description → in Roma, you can also add a brief discursive description to your ODD

Customizing — first ODD

1. Once we save the metadata, we can immediately download our ODD
2. In Roma:
 - a. ‘Save Customization’
3. In RomaJS:
 - a. ‘Download/Save Customization’
4. Open both files in Oxygen
 - a. File/Open/File Location

State of the ODD

- At this point it contains:
 - The metadata we've entered
 - Four complete modules:
 - core
 - tei
 - header
 - textstructure
- The ODDs created are slightly different
 - RomaJS has license information
 - RomaJS removes the element `<teiCorpus>` from the module Core.

```
<?xml version="1.0"?>
<TEI xmlns="http://www.tei-c.org/ns/1.0" xml:lang="en">
  <teiHeader>
    <fileDesc>
      <titleStmt>
        <title>TEI Workshop Example</title>
        <author>TSG</author>
      </titleStmt>
      <publicationStmt>
        <p>for use by whoever wants it</p>
      </publicationStmt>
      <notesStmt>
        <note type="ns">http://www.example.org/ns/nonTEI</note>
      </notesStmt>
      <sourceDesc>
        <p>created on Wednesday 27th March 2019 04:28:15 PM</p>
      </sourceDesc>
    </fileDesc>
  </teiHeader>
  <text>
    <front>
      <divGen type="toc"/>
    </front>
    <body>
      <p>This TEI ODD is a step by step example for a workshop.</p>
      <schemaSpec ident="tei_workshop_example" docLang="en" prefix="tei_w_e_" xml:lang="en">
        <moduleRef key="core" except=""/>
        <moduleRef key="tei" except=""/>
        <moduleRef key="header" except=""/>
        <moduleRef key="textstructure" except=""/>
      </schemaSpec>
    </body>
  </text>
</TEI>
```


Customizing — add whole modules — Roma

Let's start by adding a couple of modules: verse and transcr

TEI Roma: generating validators for the TEI

Modules

New Customize Language **Modules** Add Elements Change Classes Schema Documentation Save Customization

List of TEI Modules			List of selected Modules
Module name	A short description	Changes	
add analysis	Simple analytic mechanisms		remove core
add certainty	Certainty and uncertainty		tei
add core	Elements common to all TEI documents		remove header
add corpus	Corpus texts		remove textstructure
add dictionaries	Dictionaries		
add drama	Performance texts		
add figures	Tables, formulae, notated music, and figures		
add gall	Character and glyph documentation		
add header	The TEI Header		
add iso-fs	Feature structures		
add linking	Linking, segmentation and alignment		
add msdescription	Manuscript Description		
add namesdates	Names and dates		
add nets	Graphs, networks, and trees		
add spoken	Transcribed Speech		
add tagdocs	Documentation of TEI modules		
add textcrit	Critical Apparatus		
add textstructure	Default text structure		
add transcr	Transcription of primary sources		
add verse	Verse structures		

In Roma:

1. Go to 'Modules' tab
2. Click 'add' next to verse
3. Click 'add' next to transcr

List of selected Modules

remove [core](#)

[tei](#)

remove [header](#)

remove [textstructure](#)

remove [verse](#)

remove [transcr](#)

Customizing — add whole modules — RomaJS

In RomaJS, because it is element oriented, the process is slightly more complicated:

1. Search for an element that belongs to the verse module, for example ‘rhyme’
2. Click the + button on the right hand-side
3. Do the same for ‘transcr’

The screenshot shows the 'Roma - ODD Customization (TEI Workshop Example)' interface. The top navigation bar includes 'SETTINGS', 'START OVER', and 'DOWNLOAD'. Below this, there are tabs for 'Elements', 'Attribute Classes', 'Model Classes', and 'Datatypes'. The 'Elements' tab is selected. On the right, there is a search bar with '1 by module' and 'filter items'. The main content area displays a list of elements with their descriptions and associated modules. A red box highlights the 'certainty' module for the 'respons' element and the 'drama' module for the 'role' element.

Element	Description	Module
<input type="checkbox"/> respons	(responsabilità) indica i soggetti responsabili della codifica di determinati elementi	+ (certainty)
<input checked="" type="checkbox"/> respStmt	(statement of responsibility) supplies a statement of responsibility for the intellectual content of a text, edition, recording, or series, where the specialized elements for authors, editors, etc. do not suffice or do not apply. May also be used to encode ...	x (core)
<input checked="" type="checkbox"/> restore	segnala il ripristino del testo a uno stato precedente in virtù della rimozione di un'annotazione o istruzione a opera dell'autore o curatore	x (transcr)
<input checked="" type="checkbox"/> retrace	contains a sequence of writing which has been retraced, for example by over-inking, to clarify or fix it.	x (transcr)
<input checked="" type="checkbox"/> revisionDesc	(revision description) summarizes the revision history for a file.	x (header)
<input checked="" type="checkbox"/> rhyme	segnala la stringa in rima all'interno di un verso	x (verse)
<input type="checkbox"/> role	il nome di un ruolo teatrale, secondo la lista dei personaggi.	+ (drama)

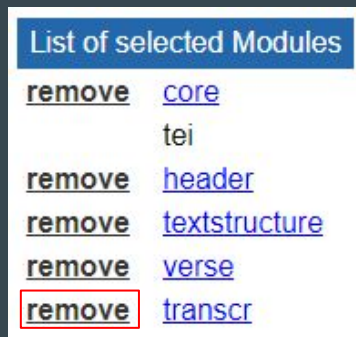
State of the ODD

- Save and download both ODDs again!
- Open them again in Oxygen
- Let's focus on the <schemaSpec>
- Notice there are two new <moduleRef> elements:
 - verse
 - transcr

```
<schemaSpec ident="tei_workshop_example" docLang="en" prefix="tei_w_e_" xml:lang="en">
  <moduleRef key="core" except=""/>
  <moduleRef key="tei" except=""/>
  <moduleRef key="header" except=""/>
  <moduleRef key="textstructure" except=""/>
  <moduleRef key="verse" except=""/>
  <moduleRef key="transcr" except=""/>
</schemaSpec>
```

Customizing — removing whole modules

To remove a whole module, we simply reverse the process

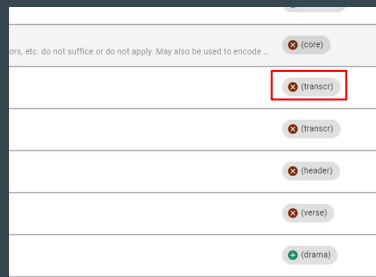


In Roma:

1. Go to 'Modules' tab
2. Click 'remove' next to transcr, on the right hand side

In RomaJS:

1. Find an element that belongs to transcr
2. Click the button on the right hand side



State of the ODD

- Now the ODD simply has one less <moduleRef>

```
<schemaSpec ident="tei_workshop_example" docLang="en" prefix="tei_w_e_" xml:lang="en">
  <moduleRef key="core" except=""/>
  <moduleRef key="tei" except=""/>
  <moduleRef key="header" except=""/>
  <moduleRef key="textstructure" except=""/>
  <moduleRef key="verse" except=""/>
</schemaSpec>
```

Customizing — adding elements — Roma

We may have been a little rash in removing transcr — there is at least one element that we need, <subst>

TEI Roma: generating validators for the TEI

Modules

New Customize Language **Modules** Add Elements Change Classes Schema Documentation Save Customization

List of TEI Modules			List of selected Modules
Module name	A short description	Changes	
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add certainty	Certainty and uncertainty		tei
add core	Elements common to all TEI documents		remove header
add corpus	Corpus texts		remove textstructure
add dictionaries	Dictionaries		
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add figures	Tables, formulae, notated music, and figures		
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add spoken	Transcribed Speech		
add tagdocs	Documentation of TEI modules		
add textcrit	Critical Apparatus		
add textstructure	Default text structure		
add transcr	Transcription of primary sources		
add verse	Verse structures		

In Roma:

1. Go to 'Modules' tab
2. Click on the module name, transcr
3. You'll see a list of all elements in transcr

Customizing — adding elements — Roma

TEI Roma: generating validators for the TEI

Change module

[New](#) [Customize](#) [Language](#) [Modules](#) [Add Elements](#) [Change Classes](#) [Schema](#) [Documentation](#) [Save Customization](#)

[Back](#)

List of elements in module transcr

	Include	Exclude	Name	Description	Attributes
addSpan	<input checked="" type="radio"/>	<input type="radio"/>	<input type="text" value="addSpan"/>	(added span of text) marks the beginning of a longer sequence of text added by an author, scribe, annotator or corrector (see also add).	Change attributes
am	<input type="radio"/>	<input checked="" type="radio"/>	<input type="text" value="am"/>	(abbreviation marker) contains a sequence of letters or signs present in an abbreviation which are omitted or replaced in the expanded form of the abbreviation.	Change attributes
damage	<input checked="" type="radio"/>	<input type="radio"/>	<input type="text" value="damage"/>	contains an area of damage to the text witness.	Change attributes
damageSpan	<input checked="" type="radio"/>	<input type="radio"/>	<input type="text" value="damageSpan"/>	(damaged span of text) marks the beginning of a longer sequence of text which is damaged in some way but still legible.	Change attributes
delSpan	<input type="radio"/>	<input checked="" type="radio"/>	<input type="text" value="delSpan"/>	(deleted span of text) marks the beginning of a longer sequence of text deleted, marked as deleted, or otherwise signaled as superfluous or spurious by an author, scribe, annotator, or corrector.	Change attributes
ex	<input type="radio"/>	<input checked="" type="radio"/>	<input type="text" value="ex"/>	(editorial expansion) contains a sequence of letters added by an editor or transcriber when expanding an abbreviation.	Change attributes
facsimile	<input checked="" type="radio"/>	<input type="radio"/>	<input type="text" value="facsimile"/>	contains a representation of some written source in the form of a set of images rather than as transcribed or encoded text.	Change attributes
fw	<input type="radio"/>	<input checked="" type="radio"/>	<input type="text" value="fw"/>	(forme work) contains a running head (e.g. a header, footer), catchword, or similar material appearing on the current page.	Change attributes
handNotes	<input checked="" type="radio"/>	<input type="radio"/>	<input type="text" value="handNotes"/>	contains one or more handNote elements documenting the different hands identified within the source texts.	Change attributes
handShift	<input checked="" type="radio"/>	<input type="radio"/>	<input type="text" value="handShift"/>	marks the beginning of a sequence of text written in a new hand, or the beginning of a scribal stint.	Change attributes

1. Click in 'exclude' in the header of the table
2. Manually find the 'subst' element
3. Change the radio button from 'exclude' to 'include'
4. Click 'Save' at the bottom of the page

Customizing — adding elements — RomaJS

In RomaJS is much simpler to add individual elements:

In RomaJS:

1. Search for ‘subst’
2. Click on the checkbox next to the element name

Roma - ODD Customization (TEI Workshop Example)

SETTINGS START OVER DOWNLOAD

Elements Attribute Classes Model Classes Datatypes

by module subst

☒ **subst**
(sostituzione) raggruppa una o più cancellazioni insieme a una o più aggiunte quando la combinazione va considerata come singolo intervento sul testo (transcr)

☐ **substJoin**
(substitution join) Identifies a series of possibly fragmented additions, deletions or other revisions on a manuscript that combine to make up a single intervention in the text (transcr)

State of the ODD

- transcr has returned to our module!
- Except that in the Roma version, it has a whole series of element names excepted from it
 - Essentially, we are adding a whole module, except all the elements we don't want
 - In this case, the only element left in transcr is <subst>!
- What happens in the RomaJS version?

```
<schemaSpec ident="tei_workshop_example" docLang="en" prefix="tei_w_e_" xml:lang="en">
  <moduleRef key="core" except=""/>
  <moduleRef key="tei" except=""/>
  <moduleRef key="header" except=""/>
  <moduleRef key="textstructure" except=""/>
  <moduleRef key="verse" except=""/>
  <moduleRef key="transcr"
    except="addSpan am damage
    damageSpan delSpan ex facsimile fw
    handNotes handShift line listTranspose
    metamark mod path redo restore retrace secl
    sourceDoc space substJoin supplied surface surfaceGrp
    surplus transpose undo zone"
  />
</schemaSpec>
```

Customizing — removing elements

To remove an element, we simply reverse the process:

In Roma:

1. modules
2. select relevant module
3. find relevant element
4. change radio button to 'exclude'
5. (or, if you only have one element from that module, simply remove the module as a whole)

In RomaJS

1. Search for the element
2. Untick the box

Customizing — changing attributes — Roma

We can also constrain elements to only accept certain values. Let's say we want our `<lg>` to all have `@types`, and those types need to obey a certain typology

In Roma:

1. Repeat the steps to reach the desired element
2. (modules → core → lg)
3. On the right hand side, click on 'change attributes'
4. Find the `@type` attribute
5. Click on the `@type` attribute

TEI Roma: generating validators for the TEI

Change module

[New](#) [Customize](#) [Language](#) [Modules](#) [Add Elements](#) [Change Classes](#) [Schema](#) [Documentation](#) [Save Customization](#)

[back](#)

List of elements in module:transcr

	Include	Exclude	Name	Description	Attributes
addSpan	<input checked="" type="radio"/>	<input type="radio"/>	<input type="text" value="addSpan"/>	(added span of text) marks the beginning of a longer sequence of text added by an author, scribe, annotator or corrector (see also add).	Change attributes
am	<input checked="" type="radio"/>	<input type="radio"/>	<input type="text" value="am"/>	(abbreviation marker) contains a sequence of letters or signs present in an abbreviation which are omitted or replaced in the expanded form of the abbreviation.	Change attributes
damage	<input checked="" type="radio"/>	<input type="radio"/>	<input type="text" value="damage"/>	contains an area of damage to the text witness.	Change attributes
damageSpan	<input checked="" type="radio"/>	<input type="radio"/>	<input type="text" value="damageSpan"/>	(damaged span of text) marks the beginning of a longer sequence of text which is damaged in some way but still legible.	Change attributes
delSpan	<input checked="" type="radio"/>	<input type="radio"/>	<input type="text" value="delSpan"/>	(deleted span of text) marks the beginning of a longer sequence of text deleted, marked as deleted, or otherwise signaled as superfluous or spurious by an author, scribe, annotator, or corrector.	Change attributes
ex	<input checked="" type="radio"/>	<input type="radio"/>	<input type="text" value="ex"/>	(editorial expansion) contains a sequence of letters added by an editor or transcriber when expanding an abbreviation.	Change attributes
facsimile	<input checked="" type="radio"/>	<input type="radio"/>	<input type="text" value="facsimile"/>	contains a representation of some written source in the form of a set of images rather than as transcribed or encoded text.	Change attributes
fw	<input checked="" type="radio"/>	<input type="radio"/>	<input type="text" value="fw"/>	(forme work) contains a running head (e.g. a header, footer), catchword, or similar material appearing on the current page.	Change attributes
handNotes	<input checked="" type="radio"/>	<input type="radio"/>	<input type="text" value="handNotes"/>	contains one or more handNote elements documenting the different hands identified within the source texts.	Change attributes
handShift	<input checked="" type="radio"/>	<input type="radio"/>	<input type="text" value="handShift"/>	marks the beginning of a sequence of text written in a new hand, or the beginning of a scribal stint.	Change attributes

Customizing — changing attributes — Roma

TEI Roma: generating validators for the TEI

Add some attributes

[New](#)
[Customize](#)
[Language](#)
[Modules](#)
[Add Elements](#)
[Change Classes](#)
[Schema](#)
[Documentation](#)
[Save Customization](#)

[go back to list](#)

Add a new attribute

Attribute name

Class name

Is it optional? ☒ yes ☐ no

Contents

Default value

Closed list? ☐ yes ☒ no

List of values

Description

Save

- Is it optional?
 - 'No'
- Contents
 - text, and can only be of one type, so we'll leave it as it is
- Default value
 - quatrain, for some reason
- Closed list?
 - Yes, meaning we'll have to choose from a list of accepted values
- List of values
 - The values accepted by the attribute:
couplet, quatrain, tercet, sestet
- Description
 - A descriptive text that describes the type of phenomena recorded by the attribute
- Save

Customizing — adding elements — RomaJS

In RomaJS the process is similar:

Roma - ODD Customization (TEI Workshop Example)
SETTINGS
START OVER
DOWNLOAD

Members <
<lg> <
Attributes <
@type
Revert changes

<lg>

(line group) contains one or more verse lines functioning as a formal unit, e.g. a stanza, refrain, verse paragraph, etc.

Usage
Set attribute usage.
Required

Descriptions
Contains a brief description of the object documented by its parent element, typically a documentation element or an entity.

```
1 <desc xmlns="http://www.tei-c.org/ns/1.0">The type of line group as defined by rhyming schemes, must be included in all line groups, regardless of how ridiculous that idea may be.</desc>
```

Value descriptions
Specifies any semantic or syntactic constraint on the value that an attribute may take, additional to the information carried by the datatype element.
+

Values
Set values for this attribute.
Closed

+

X
couplet

X
quatrain

State of the ODD

- We now have a few more elements:
 - `<elementSpec>` → defines new or changed elements
 - `<attList>` → groups new and changed attributes
 - `<attDef>` → defines new and changed attributes
 - `<desc>` → description
 - `<defaultVal>` → sets the default value for the attribute
 - `<valList>` and `<valItem>` → define a list of mandatory (or suggested) values

```
<schemaSpec ident="tei_workshop_example" docLang="en" prefix="tei_w_e_" xml:lang="en">
  <moduleRef key="core" except=""/>
  <moduleRef key="tei" except=""/>
  <moduleRef key="header" except=""/>
  <moduleRef key="textstructure" except=""/>
  <moduleRef key="verse" except=""/>
  <moduleRef key="transcr"
    except="addSpan am damage damageSpan
    delSpan ex facsimile fw handNotes handShift
    line listTranspose metamark mod path redo restore
    retrace secl sourceDoc space substJoin supplied surface
    surfaceGrp surplus transpose undo zone"/>
  <elementSpec ident="lg" module="core" mode="change">
    <attList>
      <attDef ident="type" mode="change" usage="req">
        <desc>The type of line group as defined by rhyming schemes, must be
          included in all line groups, regardless of how ridiculous that idea
          may be.</desc>
        <defaultVal>quatrain</defaultVal>
        <valList type="closed" mode="replace">
          <valItem ident="couplet"/>
          <valItem ident="quatrain"/>
          <valItem ident="tercet"/>
          <valItem ident="sestet"/>
        </valList>
      </attDef>
    </attList>
  </elementSpec>
</schemaSpec>
```

Customizing — what now?

So now that we've done customizing, what do we do?

- Download the schema in a language that can be understood by your editor (usually Relax NG)
 - Roma:
 - Schema/RelaxNG/Generate
 - RomaJS:
 - Download/RelaxNG Schema

Customizing — what now?

Associate the schema with your TEI document:

1. Create two new TEI files
2. Go to ‘Document/Schema/Associate Schema...’
3. Select one of the files (.rnc) you just downloaded
 - a. You can try the other .rnc file with the other TEI file
 - b. Make sure to uncheck the box ‘Keep existing schema associations’
4. Click ‘Ok’.
 - a. Notice that the declaration at the top of the document changed
5. Create a few <l> elements and group them in <lg> — what happens?
6. Add a @type to <lg> — what happens?
7. Try using other elements like <sp> or <rhyme> — what happens?

Customizing — what now?

- Enjoy your new schema!
- You can also download documentation in a variety of formats
- And you should definitely save the ODD so that you can revisit your customization in the future!

```
20 <body>
21   <lg type="">
22     <l>this is just some verse</l>
23     <l>that I wrote for a lark</l>
24     <l>it could still be worse</l>
25     <l>but I don't know how</l>
26   </lg>
27 </body>
28 </text>
29 </TEI>
30
```

value of attribute "type" is invalid; must be equal to "couplet", "quatrain", "sestet" or "tercet"

Why customize the TEI?

- Enforce consistency between one or more encoders
- Increase speed by providing a set value lists and project specific descriptions
- Generate project specific documentation
- Record relationship with the TEI in a machine-processable form
- Create a local encoding manual with embedded schema specifications (ODD)
- Provide long-term archival documentation for the project

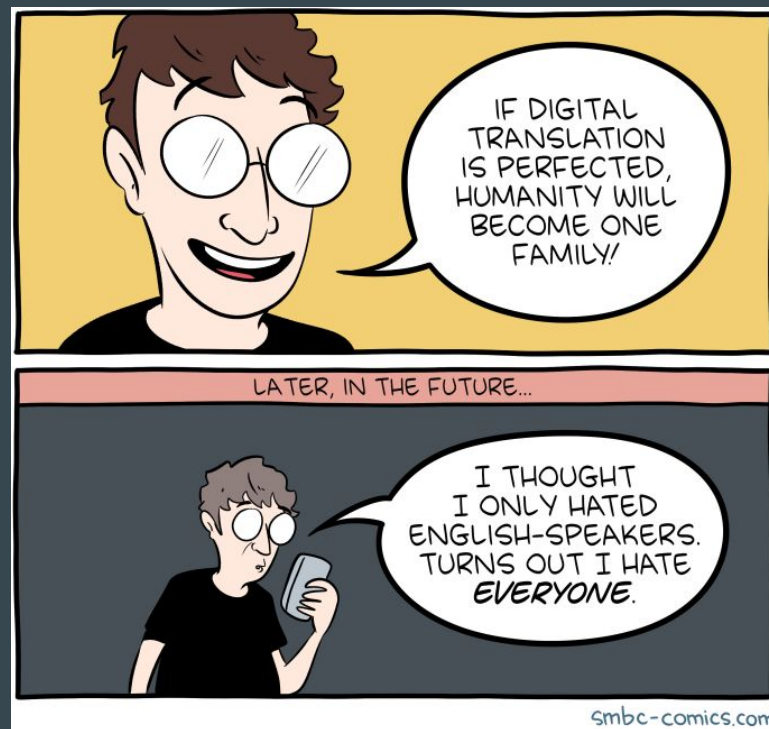
Why customize the TEI? Do you have to?

- Not strictly a requirement, but encouraged
- Customizations help remove human error
- Existing customizations are not tailor made to your project
- Customising TEI projects ensures long-term documentation for the project

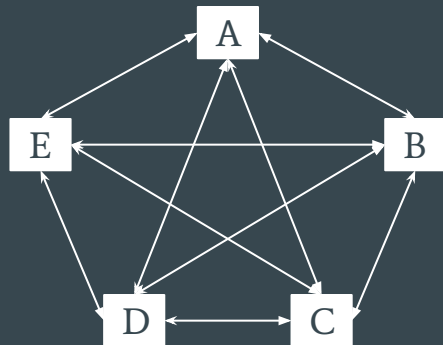
The TEI approach is not to tell you what to do — instead, do what you need, but tell us what you did

Why customize the TEI? Interoperability

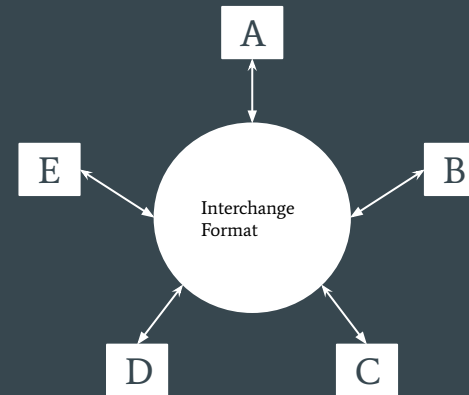
- If you simply constrain the TEI to be:
 - smaller
 - more precise
 - have specific attributes
 - have specific examples
 - localised documentation
- Then interoperability is less of a problem
- But there are still issues:
 - different practices in various communities
 - different element choices
 - variation in attribute values



Why customize the TEI? Interoperability



20 translations (n^2-n)



10 translations ($2n$)

- The ability to interchange documents improves dramatically with a common interchange format
- Customisation can implement the changes in a machine-processable format so that comparison can be automated

Why customize the TEI? Interoperability

- Interoperability necessitates mediators between resources
- Seamless interoperability can only happen when:
 - The initial data structures are so simple that become trivial
 - The method of interoperability is so superficial that it is ineffectual
 - There has been a significant loss of intellectual content

I want to know more!

- [Chapter 23 of the TEI guidelines](#)
- [TEI by Example — Customising TEI](#)
- Have a look at other TEI customizations — dig into the ODDs!

Let's practice!