



DITA-OT plug-in for work instructions

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DITA-OT plug-in for work instructions

Say goodbye to manually created lists and hello to accuracy and efficiency!

Pleased to meet you

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- Information Architect
- Working with DITA > 10 years
- Creating DITA-OT plug-ins:
 - PDF
 - HTML5

About Flow

- Based in Belgium
- Technical writing
- Technical communication consulting & coaching
- Training:
 - Structured authoring and information modeling (DITA)
 - Technical writing
 - Tools: oXygen XML Author, Adobe FrameMaker...
- Content strategy
- Information architecture
- Template design

Challenge

- Work instructions for train maintenance (SNCB) need the following information:
 - Summary of the required tools, spares and supplies at the front of the work instruction
 - Detailed information about the required tools, spares and supplies for every step

Problem: Inconsistencies between the summaries and the information further down in the content.

- Some items mentioned in the steps were not mentioned in the summaries.
- The summaries contained items which were not mentioned further down in the steps.

Challenge for technical writers

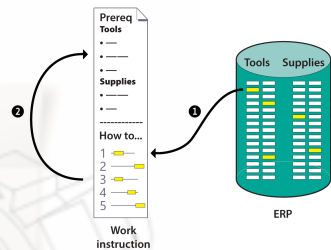
- You need to add the information twice:
 - Add the required tools, spares and supplies in every step of the work instruction
 - Create a summary of required tools, spares and supplies at the start
- A complete work instruction consists of different topics.

Mechanic's perspective

- Incorrect summaries lead to interruptions of the work.

Project objective

- 1 Use the information from the ERP system
- 2 Create a DITA-OT plug-in that:
 - Minimizes the work for the technical writers
 - Ensures correct information for the mechanic



Automatically generate summaries (lists of tools and supplies) at the front of the work instruction.

Stages in the project

DITA
specialization

DITA
template

DITA OT
plug-in

DITA specialization

- New content type: **Work instruction**
 - Based on the task content type
 - Extra elements:
 - Tools, supplies and spares per step
 - Element for SAP articles
 - Specific summary elements

Tools, supplies and spares per step

1. step cmd Cut the softened butter into small cubes and cream it together with the sugar. + cmd

info You can use a kitchen appliance for this step. + info

stepreq Requirements for current step:

tools Tools:

- tool Qty: Un: nn + + (TO0000014) Kitchen appliance nn + tool
- tool Qty: Un: nn + + (TO0000016) Knife nn + tool

tools

supplies Supplies:

- supply Qty: Un: nn + + (SUP0000001) Butter nn + supply
- supply Qty: Un: nn + + (SUP0000015) Brown sugar nn + supply

supplies

+ stepreq

+ step

SAP articles

```
<nn erp_id="SUP000001" id="000000001">Butter</nn></p>
```

A

B

Export from SAP with the following information:

A

Unique ID = Identical to ID in SAP

B

Description of the article

Summary elements

`taskbody` `prelreqs` **Before you begin:**

`summary-tools` `summary-tools` `summary-tools`

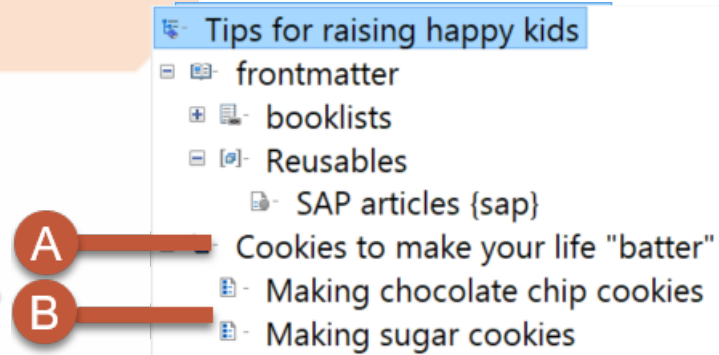
`summary-spares` `summary-spares` `summary-spares`

`summary-supplies` `summary-supplies` `summary-supplies` `prelreqs`

Work instructions template

- Fixed structure of the DITAMAP file
- Rules for adding the information on the required tools, spares and supplies in every step

DITAMAP structure



A

B

File with prerequisites **<chapter/>**

Various tasks **<topicref/>**

DITA file structure

- After every step you can add the required tools, spares and supplies in a `<stepreq/>` element.
- Every `<tool/>`, `<supply/>`, `<spare/>` element needs the following info:
 - Quantity
 - Unit (if applicable)
 - SAP article: `<nn/>`

1. **step** **cmd** Cut the softened butter into small cubes and cream it together with the sugar. **+** **cmd**

info You can use a kitchen appliance for this step. **+** **info**

stepreq Requirements for current step:

tools Tools:

- **tool** Qty: Un: **nn** **+** **TOO000014**) Kitchen appliance **nn** **tool**
- **tool** Qty: Un: **nn** **+** **TOO000016**) Knife **nn** **tool**

tools

supplies Supplies:

- **supply** Qty: Un: **nn** **+** **SUP000001**) Butter **nn** **supply**
- **supply** Qty: Un: **nn** **+** **SUP000015**) Brown sugar **nn** **supply**

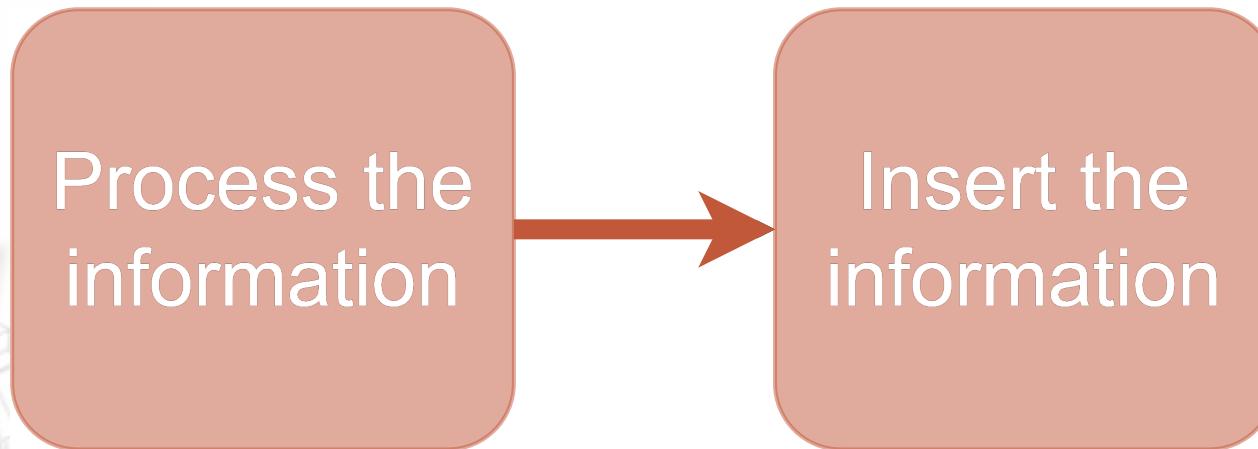
supplies

+ **stepreq**

step

DITA-OT plug-in














- Works in the preprocessing phase
- Works in two phases:



Phase 1: Process the information

- 1 Collect the information from the various tasks in a work instruction.
- 2 Sort the information per unique *erp_id*.
- 3 Add the quantities together per *erp_id* if needed:
 - `<supply/>`
 - `<spare/>`
- 4 Save the information in a separate file.

Phase 1: Process the information

-  .job.xml
-  american-cookies.dita
-  recipes.dita
-  recipes.dita_summary.xml
-  recipes-cookies.ditamap
-  recipes-cookies_MERGED.xml
-  relflagimage.list
-  sap_articles.dita
-  sap_articles.dita_summary.xml
-  subject_scheme.dictionary
-  subrelation.xml
-  usr.input.file.list
-  zandkoeken.dita

Phase 1: Process the information

```
<summary-supplies>
  <supply unit="gr" class="+ topic/li wrkinstr-d/supply "
    xtrf="file:/C:/Github/ditaOtDay2024/_documentation/american-cookies.dita"
    xtrc="supply:1;21:58" count="2" sum="345" id-unique="000000001"
    >Butter</supply>
  <supply unit="gr" class="+ topic/li wrkinstr-d/supply "
    xtrf="file:/C:/Github/ditaOtDay2024/_documentation/zandkoeken.dita"
    xtrc="supply:2;23:58" count="1" sum="150" id-unique="000000002"
    >Granulated sugar</supply>
  <supply unit="gr" class="+ topic/li wrkinstr-d/supply "
    xtrf="file:/C:/Github/ditaOtDay2024/_documentation/american-cookies.dita"
    xtrc="supply:3;30:56" count="2" sum="16" id-unique="000000003"
    >Vanilla sugar</supply>
</summary-supplies>
```

Phase 2: Insert the information

1 Populate the summary elements with the information from the summary file.

```
<SUMMARIES xmlns:mm="http://www.miramo.com/XSL/Transform"> Cookies to make
your life batter <!------->
<summary-tools>
  <tool class="+ topic/li wrkinstr-d/tool "
    xtrf="file:/C:/Github/ditaOtDay2024/_documentation/zandkoeken.dita"
    xtrc="tool:1:54:44" count="1" sum="1" id-unique="000000007"
  >Cling film</tool>
  <tool class="+ topic/li wrkinstr-d/tool "
    xtrf="file:/C:/Github/ditaOtDay2024/_documentation/american-cookies.dita"
    xtrc="tool:2:73:44" count="2" sum="2" id-unique="000000008"
  >Baking paper</tool>
  <tool class="+ topic/li wrkinstr-d/tool "
    xtrf="file:/C:/Github/ditaOtDay2024/_documentation/american-cookies.dita"
    xtrc="tool:3:91:44" count="2" sum="2" id-unique="000000009"
  >Cooling rack</tool>
  <tool class="+ topic/li wrkinstr-d/tool "
    xtrf="file:/C:/Github/ditaOtDay2024/_documentation/american-cookies.dita"
    xtrc="tool:1:18:44" count="1" sum="1" id-unique="000000014"
  >Kitchen appliance</tool>
</summary-tools>
```

```
recipies.dita [C:\temp\recipies-cookies\recipies.dita] - <oXygen/> XML Editor
File Edit Find Project Options Tools Document Window Help
recipies.dita X
task
85 </prolog>
86 <taskbody class="- topic/body task/taskbody " xtrc="taskbody:1:5:15"
87 xtrf="file:/C:/Github/ditaOtDay2024/_documentation/recipes.dita">
88 <prelreqs class="+ topic/section task/prereq wrkinstr-d/prelreqs "
89 id="prelreqs_pyj_41k_f1c" xtrc="prelreqs:1:6:45"
90 xtrf="file:/C:/Github/ditaOtDay2024/_documentation/recipes.dita">
91 <summary-tools class="+ topic/ul wrkinstr-d/summary-tools "
92 id="summary-tools_fxf_41k_f1c" xtrc="summary-tools:1:7:61"
93 xtrf="file:/C:/Github/ditaOtDay2024/_documentation/recipes.dita">
94 <tool xmlns:mm="http://www.miramo.com/XSL/Transform"
95 class="+ topic/li wrkinstr-d/tool " count="1"
96 id-unique="000000007" sum="1" xtrc="tool:1:54:44"
97 xtrf="file:/C:/Github/ditaOtDay2024/_documentation/zandkoeken.dita"
98 >Cling film</tool>
99 <tool xmlns:mm="http://www.miramo.com/XSL/Transform"
100 class="+ topic/li wrkinstr-d/tool " count="2"
101 id-unique="000000008" sum="2" xtrc="tool:2:73:44"
102 xtrf="file:/C:/Github/ditaOtDay2024/_documentation/american-cookies.dita"
103 >Baking paper</tool>
104 <tool xmlns:mm="http://www.miramo.com/XSL/Transform"
105 class="+ topic/li wrkinstr-d/tool " count="2"
106 id-unique="000000009" sum="2" xtrc="tool:3:91:44"
107 xtrf="file:/C:/Github/ditaOtDay2024/_documentation/american-cookies.dita"
108 >Cooling rack</tool>
109 <tool xmlns:mm="http://www.miramo.com/XSL/Transform"
110 class="+ topic/li wrkinstr-d/tool " count="1"
111 id-unique="000000014" sum="1" xtrc="tool:1:18:44"
112 xtrf="file:/C:/Github/ditaOtDay2024/_documentation/american-cookies.dita"
113 >Kitchen appliance</tool>
114 </summary-tools>
```


Result

1 Cookies to make your life "batter"

Before you begin

Tools

Quantity	Description	Article
	Cling film	SUP000007
	Baking paper	SUP000008
	Cooling rack	TOO000009
	Kitchen appliance	TOO000014
	Knife	TOO000016

Supplies

Quantity	Description	Article
345 g	Butter	SUP000001
150 g	Granulated sugar	SUP000002
16 g	Vanilla sugar	SUP000003
2	Egg	SUP000004
500 g	Flour	SUP000005
1 g	Salt	SUP000006
8 g	Baking powder	SUP000010
5 ml	Milk	SUP000011
250 g	Chocolate chips (dark chocolate)	SUP000012
8 g	Brown sugar	SUP000015

1.1 Making chocolate chip cookies

Before you begin

- Preheat the oven to 180° C.
- Let the butter come up to room temperature.

Procedure

- Cut the softened butter into small cubes and cream it together with the sugar.
You can use a kitchen appliance for this step.

Tools

1	Kitchen appliance	TOO000014
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2/5

Supplies

120 g	Butter	SUP000001
16 g	Brown sugar	SUP000015

- Add the vanilla sugar.

Supplies

8 g	Vanilla sugar	SUP000003
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- While beating the mixture, add the egg.

Supplies

1	Egg	SUP000004
---	-----	-----------

- Stir the milk into the mixture.

Supplies

5 ml	Milk	SUP000011
------	------	-----------

- Sift the flour and baking powder together and stir it into the mixture.

Supplies

220 g	Flour	SUP000005
8 g	Baking powder	SUP000010

- Mix in the chocolate.

Supplies

250 g	Chocolate chips (dark chocolate)	SUP000012
-------	----------------------------------	-----------

- Cover the baking tray with baking paper.

Tools

1	Baking paper	SUP000008
---	--------------	-----------

- Spoon the cookie dough onto the baking paper.

TIP: Leave space between the cookies so they do not melt together in the oven.

- Flatten the dough slightly with a fork and then bake it for 20 minutes until golden brown.

3/5

- Leave the cookies on a cooling rack to cool down.

Tools

1	Cooling rack	TOO000009
---	--------------	-----------

Enjoy the best chocolate chip cookies in the world!

1.2 Making sugar cookies

Before you begin

- Preheat the oven to 180° C.
- Let the butter come up to room temperature.

With this delicious recipe you can make basic sugar cookies and a wide variety of different cookie types.

Procedure

- Cream the butter, sugar, and vanilla sugar to a light and creamy consistency.

Supplies

225 g	Butter	SUP000001
8 g	Vanilla sugar	SUP000003

- Add the egg yolk and mix until well incorporated.

Supplies

1	Egg	SUP000004
---	-----	-----------

- Add the flour and the salt, and mix until firm.

Supplies

280 g	Flour	SUP000005
1 g	Salt	SUP000006

- Wrap the dough in cling film and rest it in the fridge for at least an hour.

Tools

1	Cling film	SUP000007
---	------------	-----------

- Roll the dough into balls.

4/5

- Cover a baking tray with baking paper.

Tools

1	Baking paper	SUP000008
---	--------------	-----------

- Put the dough balls onto the baking paper and flatten them slightly with a fork.
- Bake the cookies for 16 minutes or until the edges turn golden brown.
- Leave the cookies to cool on the baking tray for a couple of minutes before placing them on a cooling rack to cool down completely.

Tools

1	Cooling rack	TOO000009
---	--------------	-----------

Enjoy the best sugar cookies in the world!

5/5

Thank you

- Miramo: Corinna Kinchin
- Carmen Publishing Inc.: Rick Quattro

Questions? Comments?



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