



Evaluation Framework for Promoting Gender Equality in Research and Innovation

Introduction of the EFFORTI Online Toolbox v2.0

EFFORTI Final Event

21st May 2019

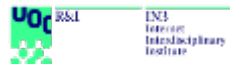
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Fraunhofer Center for Responsible Research and Innovation



Our Vision



EFFORTI On-line Toolbox 2.0 is a **web-based tool** with an **intuitive** search **process** enabling smart navigations throughout the knowledge base, by using filters and inter-connected flows.

What is already out there?

Top-5 current tools



Gender Equality in Academia and Research (GEAR) tool (2016)
...Online tool for creating and implementing a gender action plan



INTEGER - Guidelines for Gender Structural Change in High Education and Research Organizations (2015)
...Online tool for creating and implementing a gender action plan



**Current equality tools are aimed at Policy Designer.
They primarily support program development.**

PRAGES Guidelines (2009)
...Guidelines and Best Practices for Structural Change in Science

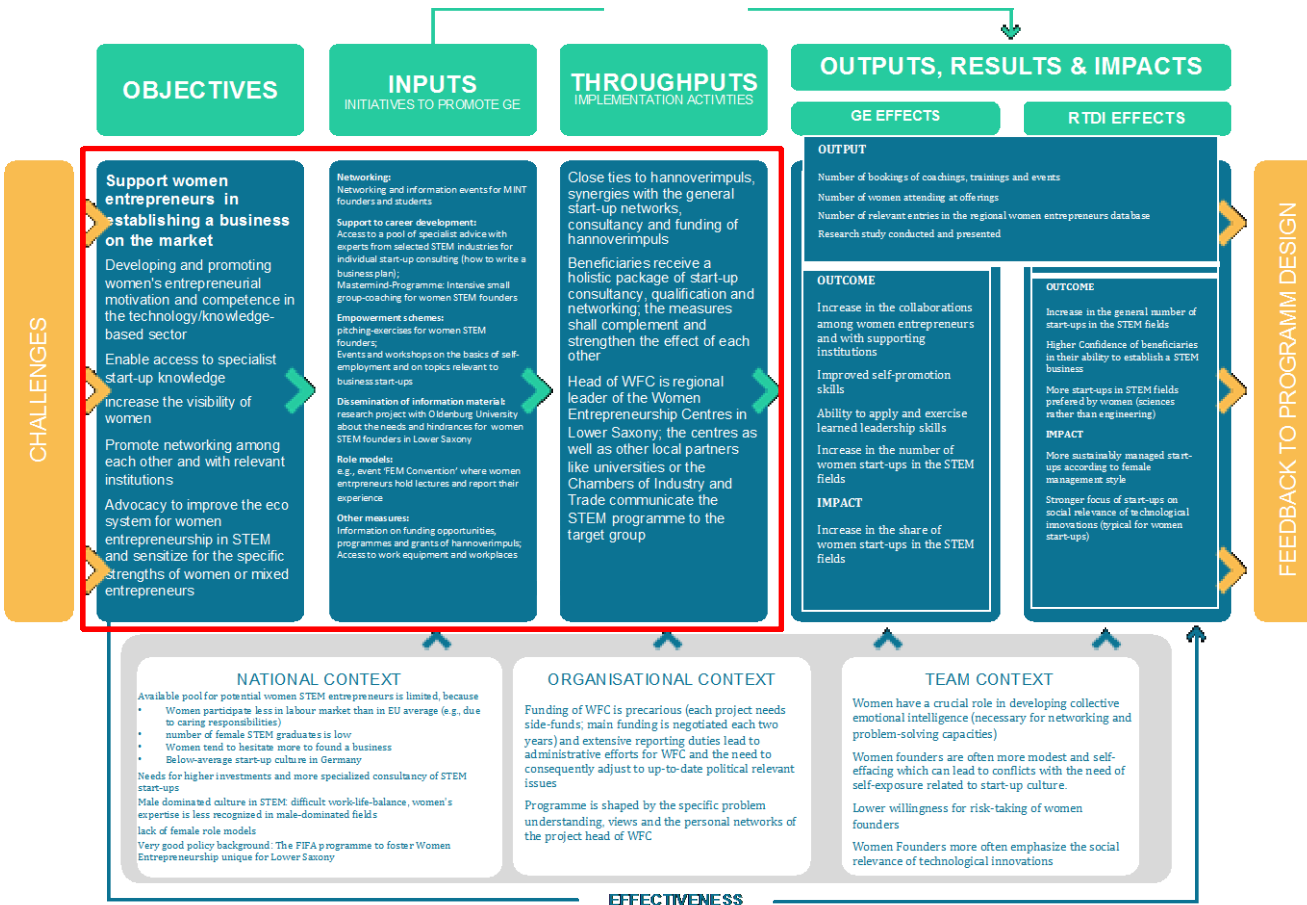


STAGES Guidelines – Structural Transformation to Achieve Gender Equality in Science (2015)
...Guidelines for structural change in science; Further development of PRAGES



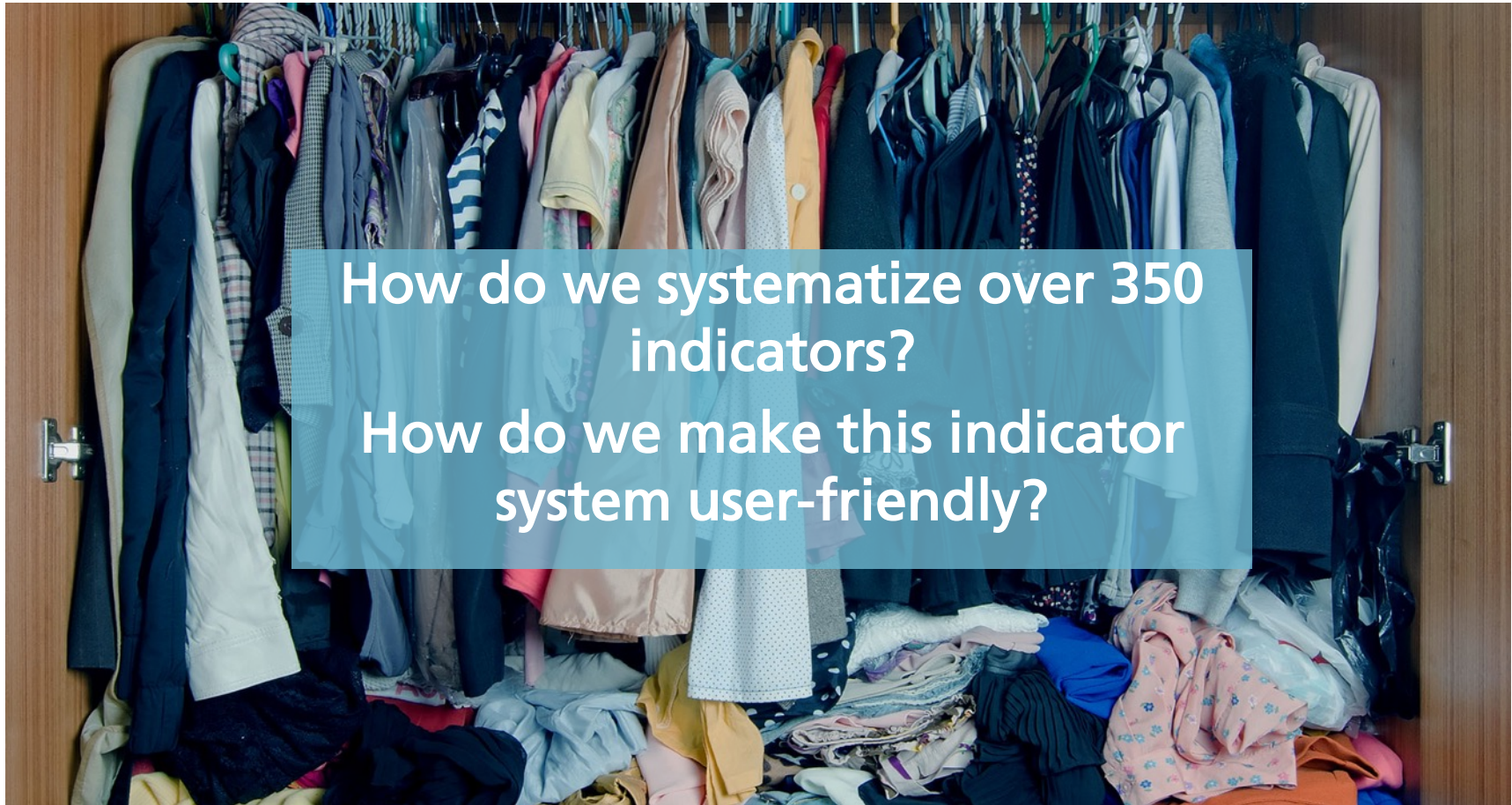
Gendered Innovations (2011)
...Guidelines for methods of gender analysis and 21 case studies

The EFFORTI Framework



EFFORTI is a novel framework that enables a wide range of stakeholders - ministries, funding agencies, programme owners, equality officers etc. - to conduct a sound and comprehensive evaluation of the gender equality but also research and innovation outputs, outcomes and impacts of gender equality (GE) measures.

Challenges of the EFFORTI-Toolbox



Challenges of the EFFORTI-Toolbox



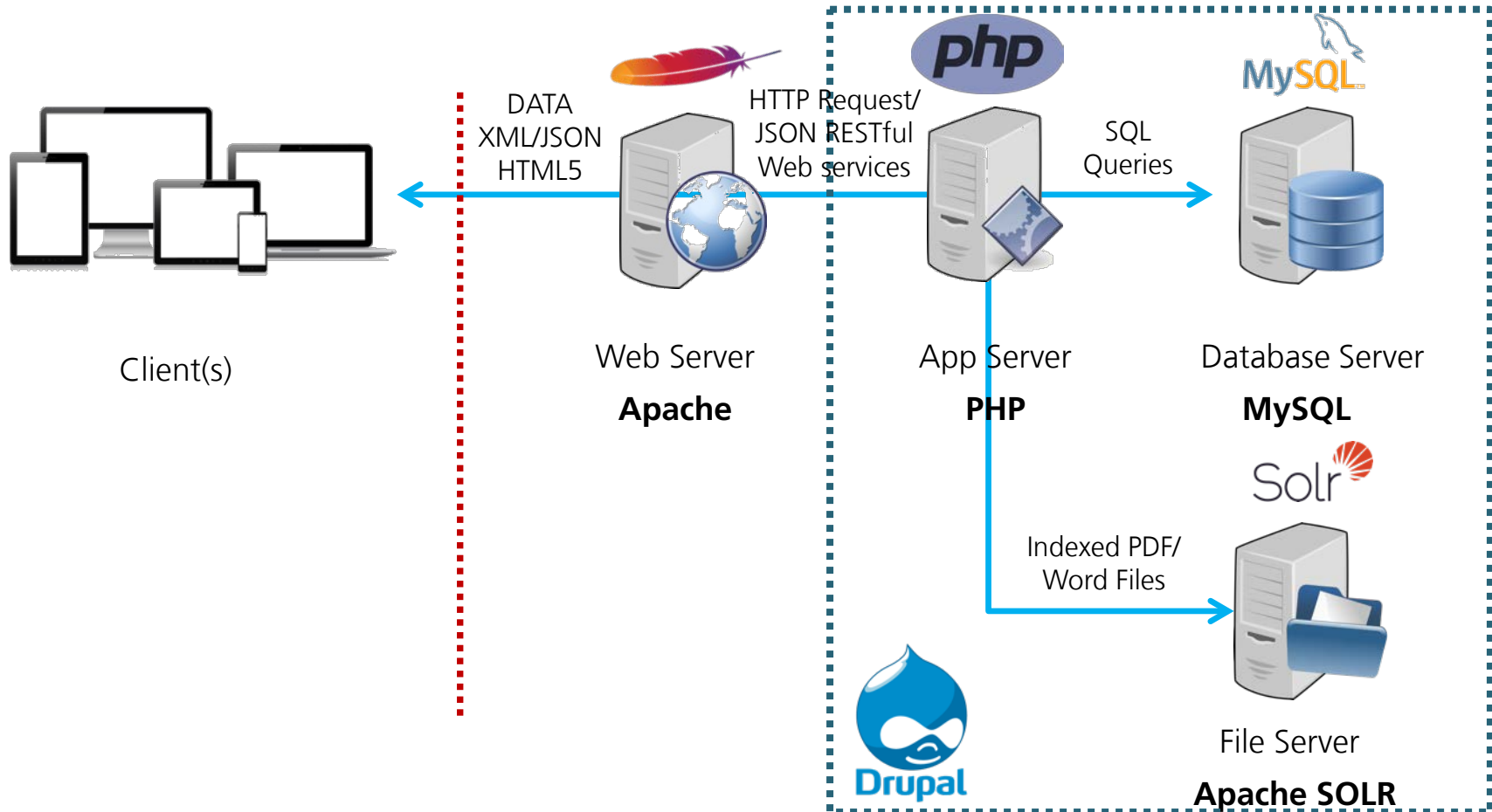
Balance between standardization
and sensitivity for each individual
case

Objectives



1. Implement using an open architecture, the novel and detailed **evaluation framework** established in the project, including a **digitized model for indicators** utilized for the analysis and evaluation of possible impacts of GE measures on RTDI.
2. Develop an **evaluation log frame** toolkit, allowing the user to utilize the EFFORTI theory based evaluation approach, the **Theory of Change (ToC)** which has been developed based on three main axes: concept/ design analysis, implementation analysis, and an impact assessment, thus modelling their own GE policy interventions.
3. Produce a dynamic **impact stories knowledge base** with ideal effect models and indicator catalog for general effect assumptions, that can lead the user through different paths, starting from an **objective** or **interventions**, categories outcomes, etc., thus leading to a **Roadmap**.

EFFORTI Toolbox 2.0 Architecture

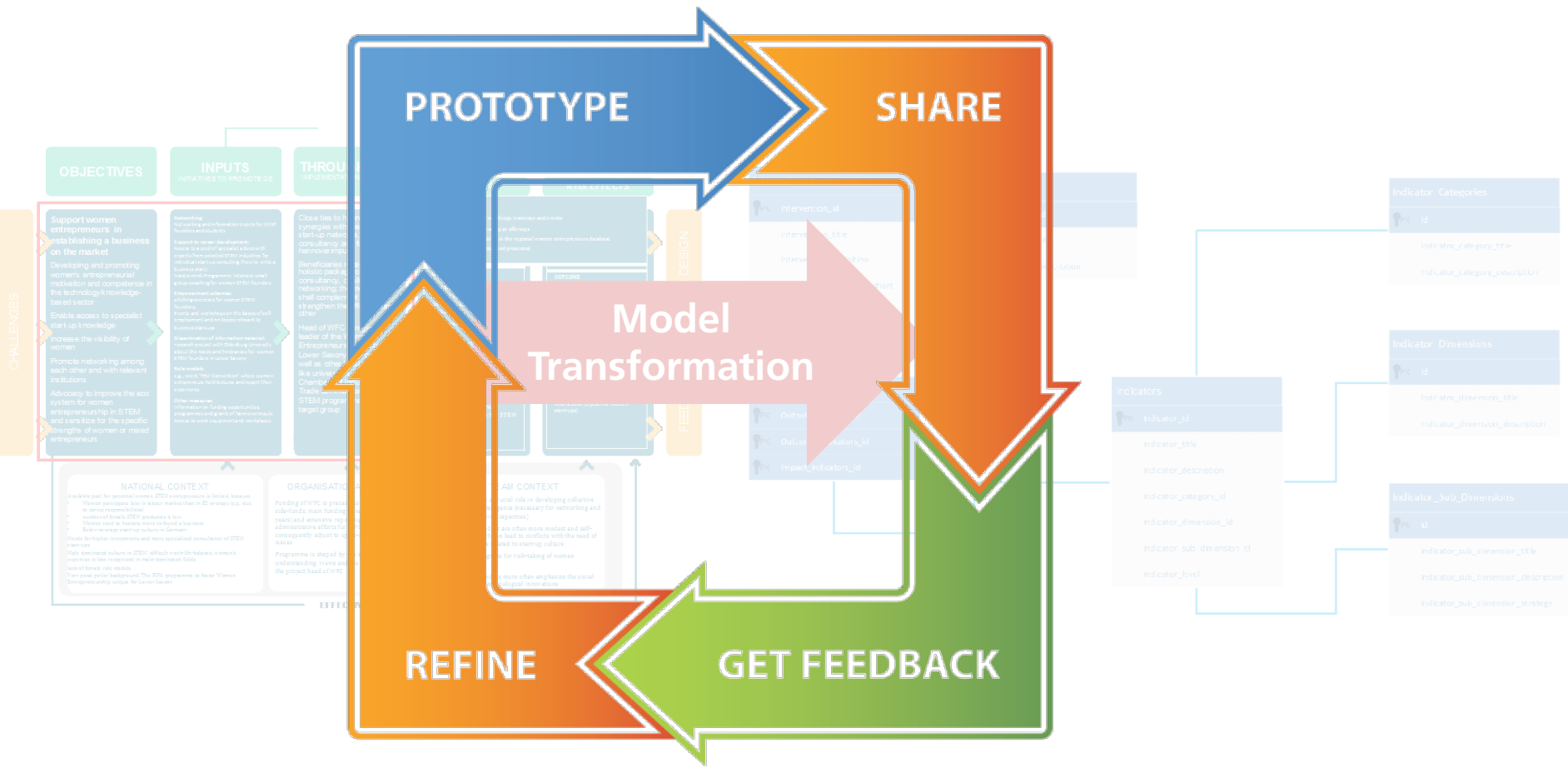


Architecture Explained



1. **Apache Web Server:** hosts the main system interface. It handles the different data downloading and uploading via http(s).
2. **PHP Application Server:** used for running and managing the business logic of the EFFORTI PHP application (toolbox).
3. **MySQL Database Server:** stores the overall structure of EFFORTI evaluation model and the data provided by the web and application server.
4. **Apache SOLR File Server:** file and search server based on the Lucene search libraries. It provides a powerful full-text search and is scalable to match search needs.
5. **RESTful Web Services:** light weight, highly scalable and maintainable and are very commonly used to create APIs for web-based applications.

Challenge – Model Transformation



Challenge – Web Services

- Aim to map core knowledge base information into RESTful Web Services.
- Provide services for core system requests (i.e. framework entities, correlation relationships, etc.).
- Advantages include: scalability, flexibility and portability, independence, etc.



Get interventions with related subdimensions structured properly for the graph
`rest/map-interventions`

Retrieve all interventions having a list of indicators
`rest/interventions-by-ind/{tids}`

Return intervention logic values/descriptions
`rest/intervention-logic`

Return observation level values/descriptions
`rest/observation-level`

Search for indicators (for the search functionality)
`rest/find-indicators`

Get the list of categories
`rest/categories`

Get the list of dimensions
`rest/dimensions`

Get list of objectives
`rest/objectives`

Search objectives by objective name
`rest/objectives/search`

Workshops

- Between 19th February to 28th of March.
- 50 participants, identical sessions.
- More participants than last year, BUT more focused on usability.

“When is it going to be public?”

“Is it going to be populated regularly?”

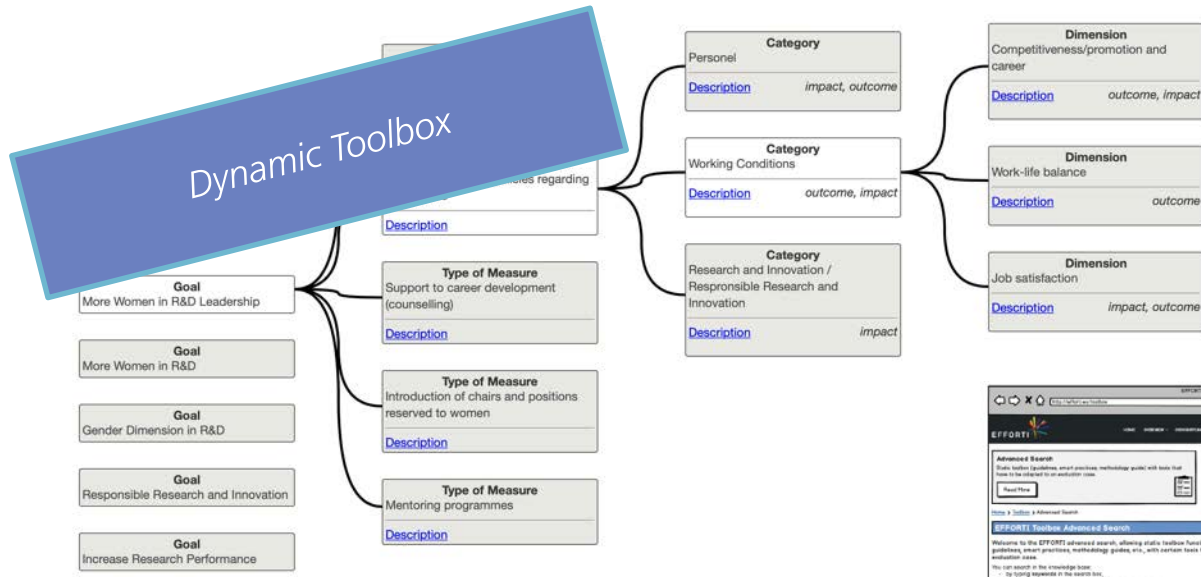
“Thank you once again for an excellent workshop in Copenhagen. Many of my colleagues at Vinnova are interested in learning more about the new toolbox and its features. I was therefore wondering if you would be interested in presenting the toolbox here at Vinnova?”

Luisa Monse – Vinnova

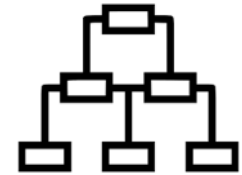
- framework (scientific background) and the usability of the tool.
- Constructive comments on additional features and behavioral functionality

“What will happen at the end of the project?”

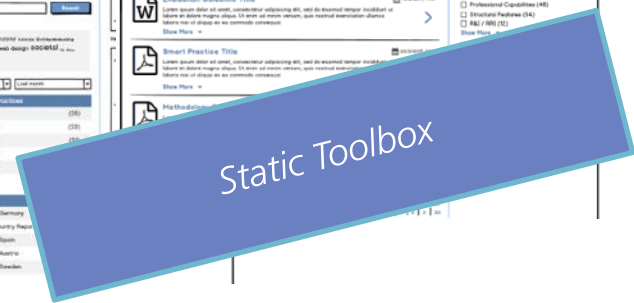
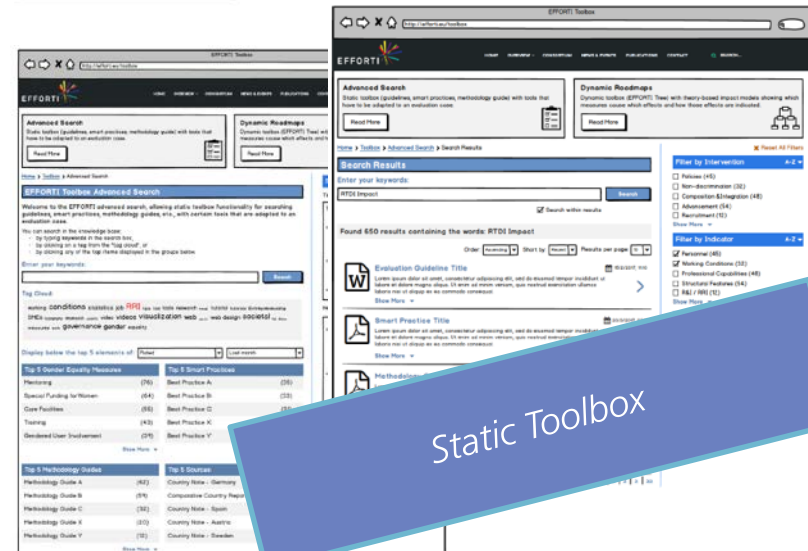
Where were we?



Dynamic Toolbox
with ideal effect
models and
indicator catalog
for general effect
assumptions



Static toolbox with guidelines,
templates and other sources
that are adapted to the case



Where are we now?

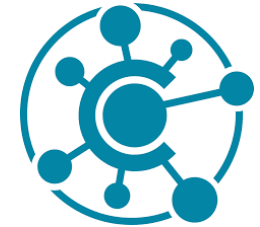
Impact Story Knowledge Base

1. HOW TO USE | 2. DEFINE | 3. INTERVENTIONS | 4. INTERVENTIONS | 5. OVERVIEW

Use the dropdown menu in the toolbox, in order to get to the relevant interventions, by selecting the relevant. You can expand the dropdown menu by clicking on the arrow next to the title.

- 1. Increase the number of women in R&I positions
- 2. Improve working conditions/work-life balance
- 3. Boost professional capabilities of women to pursue promotion
- 4. Implement gender-fair organisational structures
- 5. Integrate the gender dimension in research and teaching
- 6. Foster ethics, public engagement, science education, open access and/or governance
- 7. Increase R&I outputs and impacts

This **dynamic toolbox** with ideal effect models and indicator catalogue for general effect assumptions, can lead you through different paths, starting from an objective or intervention's.



This tool provides access to EFFORTI **theory based evaluation approach**, the Theory of Change (ToC) which has been developed based on three main axes: concept/design analysis, implementation analysis, and an impact assessment.



1. INTERVENTION | 2. OBJECTIVES | 3. INPUTS INITIATIVES TO PROMOTE GE | 4. IMPLEMENTATION ACTIVITIES | 5. OUTPUTS, RESULTS & IMPACTS

OBJECTIVES

An **objective** is the goal or aim of the intervention / measure / programme. Starting from the three gender equality objectives of the European Research Area (More women in research and innovation R&I), more women in leadership positions and the integration of gender dimensions in research and innovation content), typical objectives of a GE intervention in the EFFORTI context may be:

1. Improve working conditions / work-life balance
2. Boost professional capabilities of women to pursue promotion
3. Implement gender-fair organizational structures
4. Integrate the gender dimension in research and teaching
5. Foster RRI (ethics, public engagement, science education, open access and/or governance)
6. Increase research/innovation/economic outputs and impacts

(e.g. Improve working conditions / work-life balance, etc.)

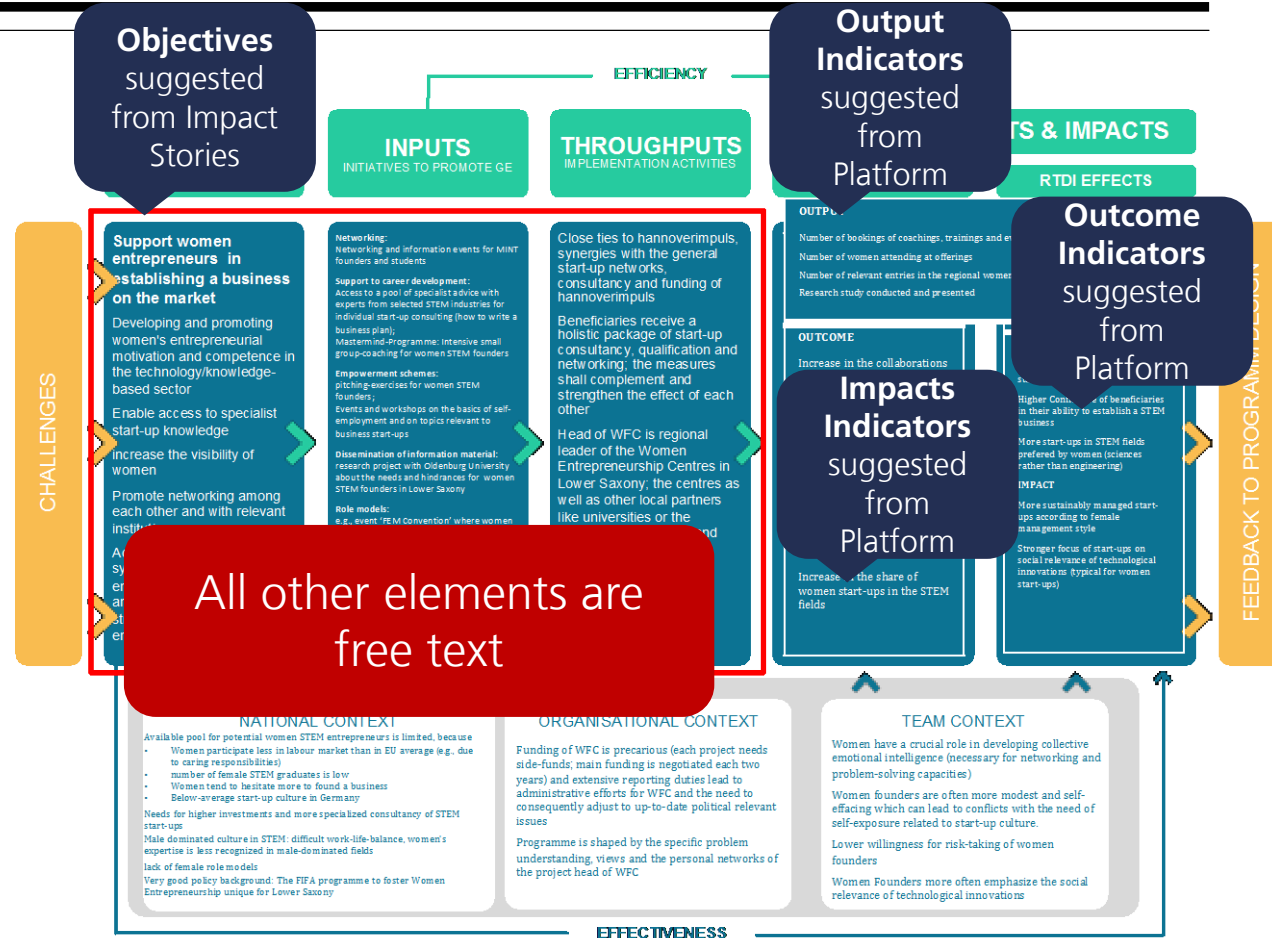
Return to List | Clear | Save | Next >



Combining Impact Stories vs. Log-Frame



- EFFORTI Intervention Logic Model.
- Impact Stories have been the baseline for the Dynamic Tool.
- Theory Of Change (ToC) template has been the basis for the Log-Frame.



Accessing the Toolkit



EFFORTI

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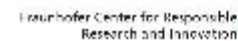
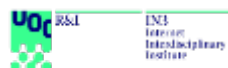
SEARCH...

EFFORTI Toolkit for Implementing and Evaluating Gender Equality

READ MORE >

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● ○ ○ ○ ○ ○

The banner features a background image of a diverse group of people in a meeting. A semi-transparent green box is overlaid on the image, containing the main title. Navigation arrows are on the left and right sides, and a "READ MORE" button is at the bottom center. A progress indicator with five circles is at the bottom.

Toolkit Introduction Assistant



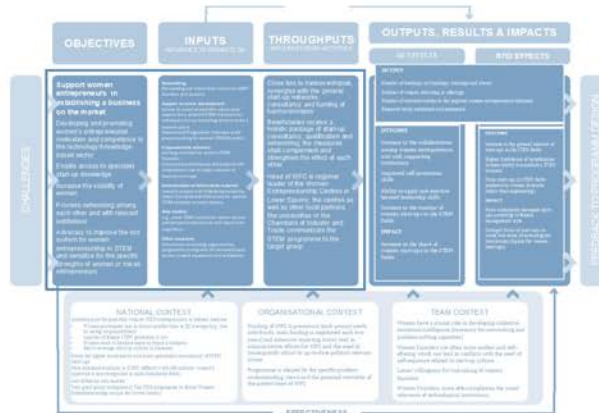
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SEARCH...

EFFORTI TOOLBOX V2.0



THE EFFORTI FRAMEWORK



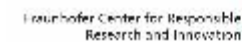
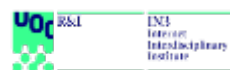
Introduction to the EFFORTI framework

Evaluation Framework for Promoting Gender Equality in Research and Innovation

EFFORTI is a novel framework that enables a wide range of stakeholders - ministries, funding agencies, programme owners, equality officers etc. - to conduct a sound and comprehensive evaluation of the gender equality but also research and innovation outputs, outcomes and impacts of gender equality (GE) measures.

What makes this framework unique in its field is its methodologically rich and thorough theoretical foundation that enables to model practice-relevant policies by taking into consideration the unique interactive dynamics in a specific context. In its European-wide research and case study work, the EFFORTI project has generated a significant source of evidence on potential impacts of all aspects of GE for society, the economy and science - thereby targeting/responding to societal needs and contemporary grand challenges.

This framework provides you with a sophisticated, holistic and comprehensive tool that you can use to document and analyze how gender equality (GE) related interventions contribute to the achievement of gender equality objectives like more women in R&D, more women in leadership, and integrating the gender dimension in research at different



Accessing the Tools



Impact Story Knowledge Base

This dynamic toolbox with ideal effect models and indicator catalogue for general effect assumptions, can lead you through different paths, starting from an objective or interventions.



Start Now

Evaluation Log Frame

This tool provides access to EFFORTI theory based evaluation approach, the Theory of Change (ToC) which has been developed based on three main axes: concept/ design analysis, implementation analysis, and an impact assessment.



Start Now

Tweets by @efforti_eu

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Join us for our final conference in Brussels: 21/22 May! Great keynotes on #evaluation of #genderequality in & first hand insights into the EFFORTI evaluation toolbox. Contact s.buehrer@isi.fraunhofer.de for last minute onboarding

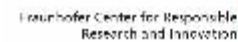
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Toolbox EFFORTI 2.0



■ Main results:

- A **web-based tool** with an **intuitive search process** enabling smart navigations throughout the knowledge base, by using filters and inter-connected flows.
- A completely digitized and modelled EFFORTI framework featuring objectives, interventions, indicators, and all related aspects.
- An adaptable and **open architecture** based upon open source software that acts as a framework for developing policy management and evaluation tools and services.
- A set of tools comprising the **EFFORTI Toolbox v2.0**, that actively utilize the EFFORTI Framework in order to provide two distinct functionalities:
 - (a) An **impact stories knowledge base**, allowing the user to navigate through different paths, starting from an **objectives** or **interventions**, etc., thus leading to a **roadmap** (dynamic approach).
 - (b) An **evaluation log frame**, allowing the user to utilize the EFFORTI theory based evaluation approach, the **Theory of Change (ToC)** which has been developed based on three main axes: concept/ design analysis, implementation analysis, and an impact assessment, thus **modelling** their own GE policy interventions.
- An **open Services API** allowing the utilization of the EFFORTI core framework by other applications (i.e. find objectives, find indicators, searching indicators by category, etc.).

What the future entails?

- More self-intuitive interaction flows at all levels.
- AI approach with respect to guiding the user through the evaluation process.
- A more detailed dynamic infographics interactive diagram.
- A sustainability model that could extend further the backbone management system of the evaluation framework.
- A personalization and recommendation approach that can utilize profile information and stored data.
- A role-task based approach for proving tailored information and flows.

Thank you for your attention!



www.efforti.eu

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