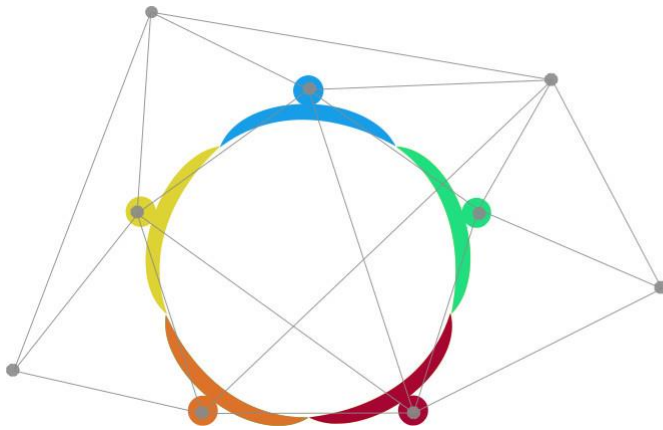




INEDIT

open INnovation Ecosystems
for Do It Together process

D3.2. FRAMEWORK OF ADAPTIVE STYLE GENERATION BASED ON AUTOENCODER NETWORKS

AIMEN

Version 1.3

May 2021



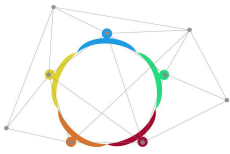


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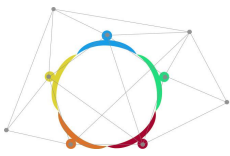


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1. Introduction

1.1. Introduction

This deliverable comprehends developments in task 3.1 and 3.2 that aim to support the co-creation experience of the INEDIT project in a community-based approach.

These tasks try to support and enable an interactive user experience for furniture design, where users without technical knowledge of 3D design can benefit from the AI applications to create fully unique and personalized furniture. To that end, we aim to create a set of AI-based tools for the generation and recommendation of furniture items that will be integrated in the INEDIT platform.

D3.2 aims to present the developed software modules to the partners of the consortium, explaining the methodology, algorithms and data used for the development, as well as the interfaces that are provided for the integration with other softwares.

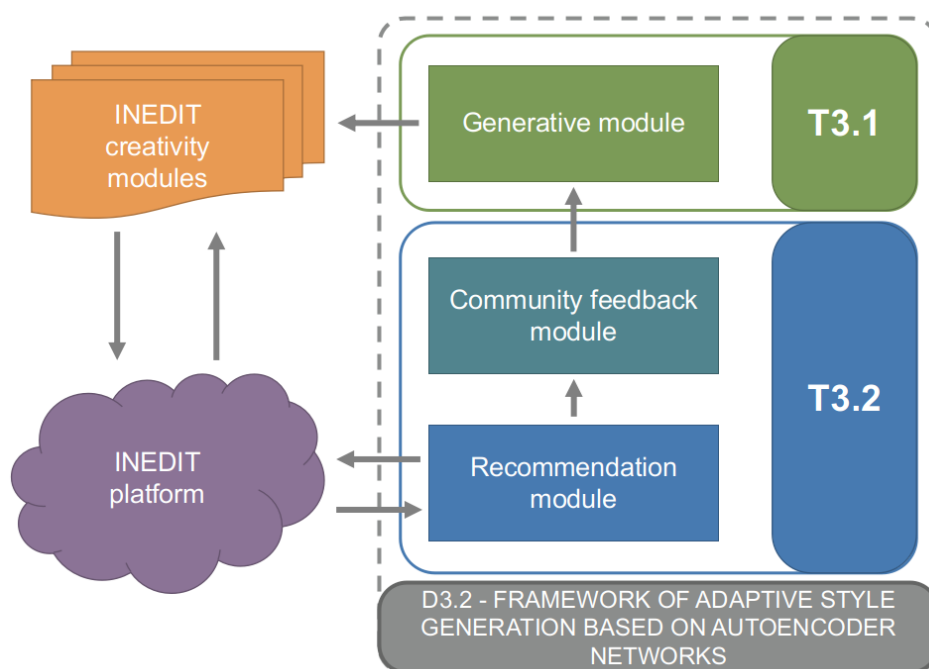


Figure 1: D3.2 in the context of INEDIT WP3

The work carried on has been structured in three software modules that interact between themselves and with the other modules of WP3:

- **Generative module:** This module can generate 3D models of random pieces of furniture. The inputs of the module are the type of furniture and a random seed that determines the style.
- **Recommendation module:** This module can recommend existing pieces of furniture, given other pieces or some keywords about the generation.
- **Community feedback module:** This module is able to link the community interactions (recommendations and/or community feedback) with the generation module, to create furniture that matches certain trends or styles, and acting as a guide of the generative module.