Textile and Clothing Business Labs
Stimulating the Innovation Based Recovery

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1 Introduction

The European textile and clothing (henceforth T&C) sector is forced to heavily invest in
research and development in order to fight against global competition focused on cheap,
fast fashion products. Micro businesses or individuals have trouble keeping up to date
with these innovations. TCBL[6] is a Horizon 2020 funded innovation action that started
in July 2015 and will run for 4 years. TCBL aims to help the European T&C industry
find new business models aimed at sustainability and innovation. Local business labs
will help bring people together and offer a place with access to specialized machinery.
An online community will be founded and act as a cross-boundary meeting place. A
knowledge repository, the *Knowledge Spaces*, will support people eager to learn or
share knowledge, thereby stimulating innovation. Semantic interpretation of the user
interactions with the Knowledge Spaces will form the basis for an analytic tool which
will help anticipate user needs.

2 TCBL Knowledge Spaces

There is a great deal of expertise in the European T&C sector: England and Germany
excel in technical textiles, Greece, Portugal and Italy are well known for tradition. Some
expertise is freely available in education programs, other more traditional expertise is in
danger of being lost in the minds of professional tailors who do not have a successor.
Due to the scale of global economy, it is hard for experts, especially SMEs or individuals,
to exploit or share this knowledge once their local customers or employers disappear.

TCBL supports the endeavour of the European T&C sector to regain competitiveness
in a quite distinctive manner. Rather than competing on price, we propose focusing on
sustainability, innovation and tradition as competitive assets. To enable this approach,
TCBL has set up the Knowledge Spaces. The Knowledge Spaces are a collection of

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[6] http://project-tcbl.eu/

IT systems where relevant information can be recorded, shared and searched. Since TCBL is mainly community driven, the information will appear in varying forms and the exact system boundaries of the Knowledge Spaces are blurry. Currently the following knowledge input and storage systems are in scope:

a) vDiscover, an open source web-based expert system to model structured data.

b) Ning, a social network platform supporting a number of virtual collaborative teams.

c) ARgh!, an augmented reality platform, which will be used to record and re-enact machine operation and sewing *do-torials*.

d) Social media platforms such as Twitter or Facebook, where (links to) articles about new trends or procedures can appear.

The information appearing in the Knowledge Spaces will take on a variety of forms. Structured data will be easiest to consume but hardest to produce. Examples include: technical details about machinery or fabrics, written tutorials or articles describing experiments. Unstructured data will be more common, as it is more naturally produced by humans, the downside being that it is harder to capture the essence of the contained information. One of the major challenges regarding the processing and adoption of the Knowledge Spaces lies in its ability to deal with the lack of structure and the use of different languages in the information produced by its users.

We plan to semantically analyze the interactions users make with the Knowledge Spaces in order to automatically suggest related content and to discover or predict upcoming trends in the T&C sector. User interactions would be transmitted to a central repository using the semantically supported Experience API[7], a format to describe on- or offline learning experiences. Examples of user interactions include: a user writing a report about a workshop, a manufacturer writing a tutorial for a machine or a learner reading an article about a specific subject. A gamification component will utilize the same data to reward and stimulate user activity.

3 Networking Expectations

We will demonstrate the current state of the Knowledge Spaces, which consists of an instance of the vDiscover platform and an active community in the Ning platform. We will discuss our plans regarding the Knowledge Spaces and TCBL as a whole.

By attending the networking session, TCBL wants to meet and connect with others who have interest in or experience with:

a) semantic analysis of (unstructured) social media and logged real world interactions

b) semantic analysis of interactions on a structured data platform

c) prediction or discovery of trends and performance from (non-)semantic user observations

d) semantically modeling business models

Furthermore, we would like to explore common research regarding learning experiences as a whole. We believe TCBL is a challenging but valuable subject as it is community-centered and provides a base for validating research against a realistic use case.

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[7] also known as xAPI or the Tin Can API