Abstract—This mini-tutorial proposes participants a fun and refreshing learning moment. Through actually playing improvisational theatre games in groups themselves, participants will be given the chance to feel what it takes to innovate in teams, and will learn new ways to generate creative ideas when eliciting requirements.

I. INTRODUCTION

According to many commentators, creativity is the new key economic activity. This holds for the development of software-intensive systems as much as in any other sector of the economy, and so we must look for ways of bringing more creativity into the software development process. Requirements engineering can be seen as a fundamentally creative process in which stakeholders and engineers work together to create ideas for new software systems. These ideas are eventually expressed as requirements [1]. In this mini-tutorial we want to show to participants how they can generate more and better new ideas through enhancing their own innovation skills and using group creativity techniques.

II. IMPROVISATIONAL THEATRE FOR REQUIREMENTS

Improvisational theatre, or improv, is a group activity in which actors simultaneously write, direct, and perform a play in front of an audience. Actors build on and act out ideas to interpret a theme given to them in real time. No actor knows what the others are thinking, but they act as if they are in the same world, imagining what others are doing, seeing, and hearing. Each responds to the other actors with new propositions that take the show forward, no matter how bizarre the direction might seem. These propositions build the performance piece by piece.

So what does improv theatre have to do with requirements? In simple terms, improv supports team-based innovation. To achieve this, it provides techniques for improving stakeholder communication, increasing mutual understanding, and generating ideas that we can later express as requirements [2].

Improvis can support requirements projects in at least two ways. First, as a training aid, improv exercises help projects stakeholders to enhance their team-based innovation skills: communication, open-mindedness, creativity, empathy, self and mutual confidence, agility...Then, as an elicitation technique, improv can help inventing rich scenarios that will trigger new requirements.

In particular, improv:
• provides a framework for group creativity: It leads to fun, builds self and mutual trust, works out your listening and communication skills, opens your mind and turns it to collaboration rather than competition mode;
• helps you understand your responsibilities in a creative group, and to find your place in it, learn you to accept errors and to use them;
• provides a framework for different types of creativity: exploration, combination, transformation;
• exploits the notion of stories and storytelling;
• offers a more collaborative and positive model for conflict resolution, in that it uses conflict as the source of creativity.

III. OBJECTIVES AND FORMAT OF THE MINI-TUTORIAL

Our first objective is to raise awareness: let participants understand that team innovation requires specific skills, let them feel what these skills are, and realise that effective techniques exist to acquire them. Our second objective is to provide participants with a first hands-on experience with a simple and effective creative requirements elicitation technique. Both objectives are pursued by letting the participants actually play selected improv games under the supervision of experimented improvisers and requirements engineering tutors.

Throughout the session, we will ask people how they feel, when playing, or when observing others playing. What they say is reformulated by the coaches in terms of improv theory as well as requirements engineering concepts. Letting people feel and express their feelings is key here. Being able to explain why they feel in such a way, and why they feel the same (or not) on their workplace, is crucial too. While on the surface it seems we are talking about a simple na"ive game, in reality we are giving them important feedback on their own team playing skills whereas on their actual workplace they would be reluctant to accept it. This tutorial is thus meant to provide a real “learning by playing” experience, and offer something that no book or standard course could provide.

IV. OUTLINE OF THE MINI-TUTORIAL

1) Introduction: We first briefly define creativity, motivate the need for it, and then expose some theoretical bases that
establish the link between improv and creativity.

2) **Awareness exercise:** This first exercise will raise group awareness and open people’s mind for the remainder of the session. It will already reveal the difficulties of establishing an efficient communication channel, and ways to tackle them.

3) **Warm-up exercise:** From this moment on, people remove their tie or sweat-shirt, if any, and are ready to go.

4) **“Chairs” exercise:** Now, we play a simple game that illustrates well the complexity of managing responsibilities in groups. Some people take too many initiatives, others never do. Some try to direct the others, some shout, some panic…The solution – which we don’t disclose here! – will be found by the participants through trial and error.

5) **“Goalkeeper” exercise:** Here we will ask participants to play around with personas. This will help them cope with their inhibitions, dare collecting the ideas that are in them, essentialize their messages into a clear and actionable form. Participants will be challenged on their reactivity and will realize how far they are ready to accept and build upon propositions from others. This exercise also serves as a brainstorming session to enrich the personas for the next exercise.

6) **Creativity triggers:** Here we will use the personas to illustrate how creativity triggers may change the way a computer-supported service is perceived, which becomes a source of new requirements. It will show participants that improv is an efficient way to leverage the creativity triggers theory.

7) **Guided improvisations:** We put the pieces together and make a fun final out of it…

**REFERENCES**


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