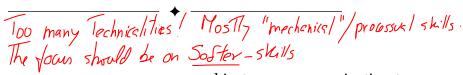# IT Team of Departamento de Engenharia Informática (DEI)

## Tomás Alexandre Diniz de Pinho

### *Learning Report*

**Abstract**—During my job at DEI's laboratories management team, I learned a lot about organization, communication, creation of documentation, meeting planning and a collection of other people skills. I also learned how to use different tools for task management and documentation development. This report describes the soft skills I have learned or improved and situations that helped me do it.

**Index Terms**—task management, organization, communcation, documentation, meetings, planning, reunions

✦

*Too many Technicalities! Mostly "mechenical"/processul skills. The focus should be on Softer-skills*

## 1 INTRODUCTION

WORKING at the laboratories management team of DEI is a diverse and time consuming job. We do everything from user support to hardware and software maintenance, as well as in-house tools development and public web applications, which shapes us as polyvalent Informatics and Computer Engineers. Dealing with so many different tasks on tight schedules implies above average organizational skills - time-management being one of the most important of them, as well as good communication skills. This report describes my evolution as an Engineer mainly in regards to soft skills, but also some hard skills picked up in the process.

## 2 ORGANIZATION

Our team strives to work using an Agile Development approach, by using SCRUM as its core management philosophy. Therefore, several soft skills are needed for tracking of software development, bug correction, hardware and software deployment and maintenance, and infrastructure planning tasks as well as

---

- *Tomás Alexandre Diniz de Pinho, nr. 73009,*
  *E-mail: tomas.pinho@tecnico.ulisboa.pt,*
  *Instituto Superior Técnico, Universidade de Lisboa.*

good in-team communication to assure productive meetings between sub-teams or the team as a whole.

### 2.1 Task Management

Applying principles learnt during my time as Marketing Vice-President for Association Internationale des Étudiants en Sciences Économiques et Commerciales (AIESEC), a student-led non-profit organization, and Software Engineering classes at Instituto Superior Técnico (IST) I was able to quickly adapt myself to the core task and project management philosophy used by our team, SCRUM.

Dividing work into small and objective tasks rated by priority has been proven to work well in IT management scenarios and works amazingly well for the gamification of work, as the psychological response triggered by marking a task as completed in a shared board-like environment motivates most people to become more efficient at their jobs. As a videogame player for most of my life, this approach works very well for me.

I have also seen these practices spill into my own private life, as I now tend to organize my time by using an online calendar, a note taking application and a SCRUM-like board for tasks and goals I wish to complete. I have, therefore, become a more organized individual due to this job.

| (1.0) Excelent | LEARNING | | | | | DOCUMENT | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (0.8) Very Good | CONTEXT x2 | SKILLS x1 | REFLECT x4 | S+C x1 | SCORE | Structure x0.25 | Ortogr. x0.25 | Gramm. x0,.25 | Format x0.25 | Title x0.5 | Filename x0.5 | SCORE |
| (0.6) Good | | | | | | | | | | | | |
| (0.4) Fair | 1.8 | 0.8 | 3.6 | 0.8 | 7.0 | 0.25 | 0.25 | 0.25 | 0.25 | 0.5 | 0.5 | 2 |
| (0.2) Weak | | | | | | | | | | | | |

## 2.2   Communication

Communication plays a big role in any team, and ours is no different. When I first joined, Samuel Bernardo, our team coordinator, told me I was to keep the team aware of what I was doing at all times and not to feel bad for asking any questions I may have. This sort of approach has had a huge impact on the way we work and our team culture, since the team feels more like a community and a group of friends striving for improvement of DEI's infrastructure and laboratories and own self-improvement, rather than a loosely knit group of individuals working just for the sake of a research grant at the end of the month.

All problems, questions and actions taken in regards to our work here are reported via e-mail, their status updated in our task management tools and any information produced is to be inserted in our internal repository of information, our private wiki. This makes objectiveness a crucial part of our communication.

All decisions are made as a team, including every team member's opinion, which is good for incorporating each own's set of skills, since we have different research interests and backgrounds. This makes honesty and objective criticism an important part of communcation in the way we express and convey our own opinions about each team member's proposed solutions.

## 2.3   Documentation

As most long running IT projects, documenting usually ends up pushed aside. DEI's team is no different, and when we got here, it already had been. Restarting the documenting process was a requirement imposed by Samuel and, thus, all projects we were involved in suffered a paradigm shift.

By creating a centralized system for GIT-based project repositories, we are able to produce and manage documentation for our in-house tools much easier, as well as linking it to more formal documentation produced on the wiki. This has helped me learn the value and methodologies for proper documentation on IT project.

## 2.4   Meetings

By participating in team meetings and meetings with DEI's management, I was able to learn how to properly structure my points, questions I had to ask and requirements analysis and evaluation.

I learned how to structure and plan a meeting by carefully studying how I would present my opinions in order for them to be heard and accepted, as well as the questions I would have to ask to obtain relevant information from my peers or from key people in DEI, attempting to satisfy the needs of all stakeholders in the projects we develop by compromising.

I also learned a lot about how DEI works and got a glimpse on how other organizations work.

# 3   TOOLS

In order to implement the practices described above, as IT students, a software approach seems to work best. Therefore, I will proceed to enumerate tools I had to learn how to use to make our team management possible.

E-mail plays a key role in our communication when we're not physically together, and so its organization is crucial for efficient reading and looking information up. I learned how to properly organize my e-mail inbox by creating automatic filters that prioritize work and organize specific types of messages.

Trello [1] is a dedicated cloud-based project management tool made specifically for the design and implementation of SCRUM boards. Due to its simplicity of usage and organization, it allows us as a team to have a better look on what each person is doing, their responsabilities and completion state.

Flyspray [2] is a bug-tracking tool that allows us to have a deeper look at the problems we have to solve in the laboratories. The sort of tasks we create in it are smaller, but, usually, more detailed problems we intend to solve which may require deeper technical knowledge.

Dokuwiki [3] is a wiki-management software that allows us to easily build documentation in our internal network.

I believe that without these tools in software form, organizing ourselves would be much harder, as they provide such easy ways of looking at what we do and updating their statuses.

## 4 REUNIONS

This year we decided to relaunch the tradition of reunions of former DEI's System Administration team members and we organized two dinners with people that worked here as far as the 90's.

It is good to get a good look at history in order to learn from the mistakes of others to ensure a better future for an organization. We talked about our current problems with former administrators and realize that those same problems occurred in the past, which gave us extremely good insights as previous solutions were shared and, in some cases, worked again.

We learned about their current employment situation, how much they grew after leaving the university and how the job market works for Systems Administrators.

Sharing experiences gives context to the way we work and I realized that whatever we do here today will potentially make a lasting difference for generations of Systems Administrators to come.

## 5 CONCLUSION

Working in this team may seem daunting at first, due to all the technical skills needed to do the job, but soft skills are also extremely important. Whatever we do here has an impact on other people, so we must be good communicators, and be extremely good time managers in order to balance our studies, working here and our own private lives.

I learned a lot about how things work in the real world, a perspective I could not possibly have from classes alone, and how people think and their own needs, that may, in some cases, be so incredibly different from mine. As an introvert, these people skills I learned on the job will be extremely useful for the rest of my life.

## REFERENCES

[1] "Trello." [Online]. Available: https://trello.com/
[2] "Flyspray." [Online]. Available: http://flyspray.org/
[3] "Dokuwiki." [Online]. Available: https://www.dokuwiki.org/

**Tomás Alexandre Diniz de Pinho** Student at IST, systems administrator at DEI.

*[Handwritten note:] In this type of document (technical), the conclusion should start with a summary of the subject addressed and then should highlight the results.*