



DENMARK/PAKISTAN TECH START-UP AGILE COLLABORATION

Denmark/Pakistan IT Entrepreneur Forum (DPEF)

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SUMMARY

The Denmark/Pakistan Tech start-up agile collaboration consisted of a pilot project between Denmark and Pakistan that was held in July 2021. The objective of the agile pilot project was to create a women friendly work environment in Pakistan and examine collaboration between Denmark/Pakistan tech working *cultures/methods* and identify improvements.

The Denmark/Pakistan tech start-up agile pilot project was initiated based on numerous independent studies¹ indicating women harassment as being a major issue in Pakistan impacting women engaging in workplaces.

The pilot project was based on google design sprint² agile methodology where the 1-week format of understand/sketch/decide/prototype and validate was supplemented with a development week to form one sprint enabling a Proof of Concept Design. The pilot project team consisted of a Denmark start-up and a Pakistan start-up collaborating in developing a case handling solution on women harassment for workplaces in Pakistan.

Through the pilot project we learned that despite the timeboxed nature of the agile innovation format and cultural differences having the supplementary skillset, tools and experience level is decisive to come up with a value-added tech solution. Having an agile facilitator with a Denmark/Pakistan background also add to the pilot project communication and follow-up on agreed tasks.

Furthermore, we learned that a strong internet connection is an absolute pre-requisite for such collaborations, and it is equally important that the regional team members sit in one location to add quality to the daily group discussion sessions. The google design format of 1 week and addition of 1 development week was a good combination to arrive at a Proof of Concept Design. However more quality could be derived with a dedicated UX designer and fulltime commitments due to unplanned Corona-impact on work schedule.

The DPEF pilot project also revealed that Pakistan societal backbones e.g. public/government institutions, research/development institutions are somewhat immature in playing a proactive support role in industrializing IT innovations. Pakistan can learn from Denmark on building a community-based backbone to support industrialization of IT and IT innovation models.

The white paper describes cross cultural collaboration between Denmark and Pakistan to transfer knowledge on state-of-the art innovation development methods from Denmark and utilize talented human capital of Pakistan within tech start-ups. Danish start-up ´s gain market access to an emerging Pakistan market with over 220 mill. population by the means of innovation and agile co-creation. During the development process the Denmark start-ups educate and support the start-ups of Pakistan to increase their skillset and attitude towards enforcement of quality requirements and documentation standards for collaborative tech solutions.

¹ UK home office: Country Policy and Information Note Pakistan: Women fearing gender-based violence V.4 Feb. 2020. [In Pakistan, women's representation in the workforce remains low \(worldbank.org\)](https://www.worldbank.org)

² [Share and engage with the Design Sprint Community \(designsprintkit.withgoogle.com\)](https://designsprintkit.withgoogle.com)

INTRODUCTION

Pakistan is with above 220 million population the 6.th largest population in the world representing the biggest middle-class market increase in Asia after China and India.

60% of the population is below the age of 30 and more than 30.000 IT graduates are educated yearly from the Pakistan universities representing a huge human capital and talent pool within IT.

Hence Pakistan represents a huge unsaturated growth market for Denmark for IT digitalization/innovation and a relative low-cost infrastructure gateway to even larger South Asian growth markets.

The low-cost infrastructure of Pakistan IT coupled with newly established women IT entrepreneurs can embed and learn from the Danish innovation concept benefitting women start-ups and Danish IT industry in general. Danish women start-ups and IT industry can improve existing business gains and efficient delivery models by collaborating with Pakistan IT and women start-ups.

Furthermore, the Danish IT companies/start-ups can spread awareness of Danish IT products/services in South Asia and benefit from a steep growth curve.

The Pakistan IT industry is looking to set a future digital ambition that Denmark being a highly digitalized society can provide inspiration to as a future digital and trusted blueprint.



OBJECTIVE

The Denmark/Pakistan start-up collaboration pilot project was held in June 2021 and presentation to stakeholders in July 2021.

The pilot duration was 2 weeks and adopted the "Google design sprint" format for the execution. The overall objective of the Denmark/Pakistan tech pilot project was to support:

The purpose of the Denmark/Pakistan Tech start-up agile collaboration pilot project was:

- To examine collaboration between 2 different *cultures/methods* and
- Identify strengths/weaknesses between start-up collaborations. The purpose was to capitalize on the strengths identify improvements.

The pilot project development team had an ambition to change working environment for women in IT in Pakistan. Provide support in establishing a standardized “women-friendly” working environment.

The pilot project did not contain any complete end to end solution however a minimum viable product (MVP) was designed for a future solution on handling of women harassment at workplaces in Pakistan.

Detailed objectives

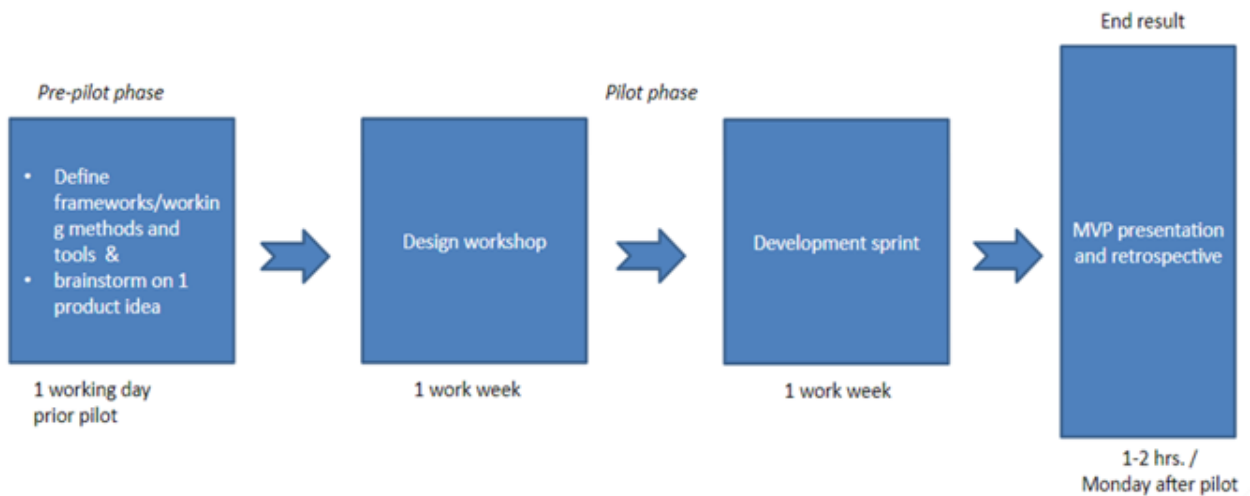
Following detailed objectives were derived for the Denmark/Pakistan women empowerment pilot project

- To promote collaboration of IT start-ups between Denmark/Pakistan and successfully established sustainable IT collaboration framework between Denmark & Pakistan. Furthermore, promote cultural exchange, IT entrepreneurship and innovation.
- Facilitate access for Danish IT and start-ups to a South Asian growth market in a manner that utilizes low-cost digital delivery infrastructure to efficiently optimize business gains.
- Advise Pakistan IT start-ups and women entrepreneurs to grow, implementing knowledge of Danish innovation concepts/services and frameworks. Aid Pakistan IT and women led start-ups to become capable collaboration partners for Danish IT start-ups

A DPEF representative participated in the pilot project team meetings as an independent observer to observe the pilot project team collaboration and identify obstacles and their solutions as part of the execution of pilot project.

Agile pilot project format

The pilot project format was based on google design sprint illustrated below:



The Denmark/Pakistan women empowerment pilot project was based on an agile development concept adhering to the following principles:

- Prior the pilot project a screening of Pakistan/Denmark start-up companies were conducted online to acquire right team, gender mix and tech skillset.
 - The selected development teams consisted of a Denmark based start-up and Pakistan based start-up to form 1 pilot project development team.
 - The pilot team was introduced to each other before the project as there was a 2 hrs. informal team meetup prior the pilot project.
 - Prior the pilot there was a brainstorming session and agreement on a common product vision.
 - The pilot consisted of 1 workshop & 1 development week defining vision/goals/user stories and developing Minimum Viable Product.
- Post the pilot there was a 1 hrs. presentation of the MVP where key user stakeholders were present including Denmark Ambassador to Pakistan & Pakistan Ambassador to Denmark.
- The pilot required:
 - 1 Agile coach from Denmark for week 1
 - 1 Scrum master from Denmark for week 2
 - There was a pseudo product owner (played by Denmark Agile coach)



FOCUS AREAS

There were the following focus areas noted within the Denmark/Pakistan women empowerment pilot project team and pilot exercise.

- Cultural barriers between Denmark/Pakistan and expectations to tools, delivery and working time
- Gaps and expectation to execution in Denmark/Pakistan tech start-ups

The focus areas became very evident in short period of time due to agile development methodology. The agile concept did put maximum pressure on the Denmark/Pakistan pilot project team for 2 weeks as full-

time commitment and progression in working tasks were pursued in daily stand-up meetings. This did highlight the below pilot project challenges during the execution of the pilot project.

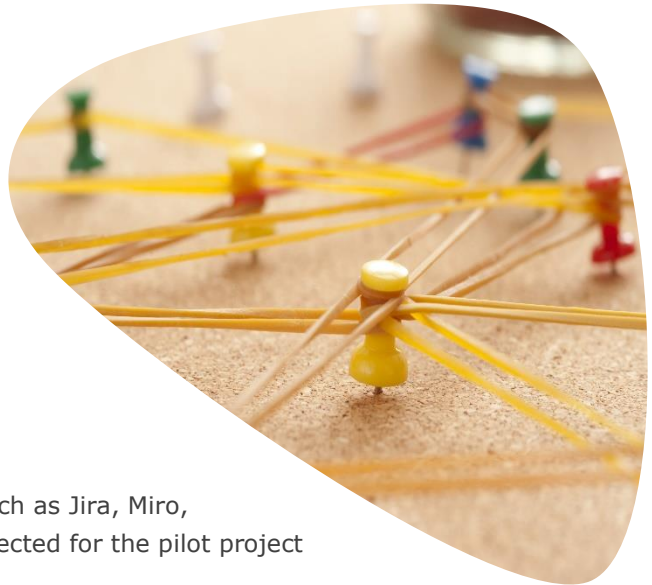
Cultural barriers and expectations to tools and delivery

Communications

The cultural barrier became evident as they Pakistan team members did not vocalize their concerns out of respect of the experience of the Danish team members. Had it been the other way around the Danish team members work transparently and hence would have vocalized their concerns as they did through the rest of the pilot as in the Nordics, honest and straight-forward communication is seen as a good collaboration attribute.

Delivery

In the pilot project it was experienced that development members from Pakistan were not so critical on the design of the proposed solution hence an existing logo of a public Pakistan authority was used as part of the solution design



Tools

Denmark team members suggested developer tools such as Jira, Miro, Confluence and teams for meetings which was also selected for the pilot project exercise.

The Pakistan team members were used to be using google drive, WhatsApp, Google and Microsoft based tools to store and share development results hence they were not accustomed to the tools suggested by the Denmark team members. However, the Pakistan team members did not oppose these tools or had dialogue around it in the planning phase. In the evaluation phase the Pakistan team members expressed that they were not used to working with the adapted developer tools. Probably they felt a bit shy due to lack of experience and had a learning approach as they went into the Denmark/Pakistan pilot project collaboration

Gaps and expectation to execution in Denmark/Pakistan tech start-ups

Age and experience

The Pakistan team members were young, around the age of 25 years old, university going students and the Denmark team members were in their mid 30ties with vast experience in working with Denmark IT companies and experienced skill level.

Hence a certain professionalism was expected by the danish team members and the Pakistan team members were not that experienced and took a bit longer to fully get up to speed with the expectations of the Denmark team members.

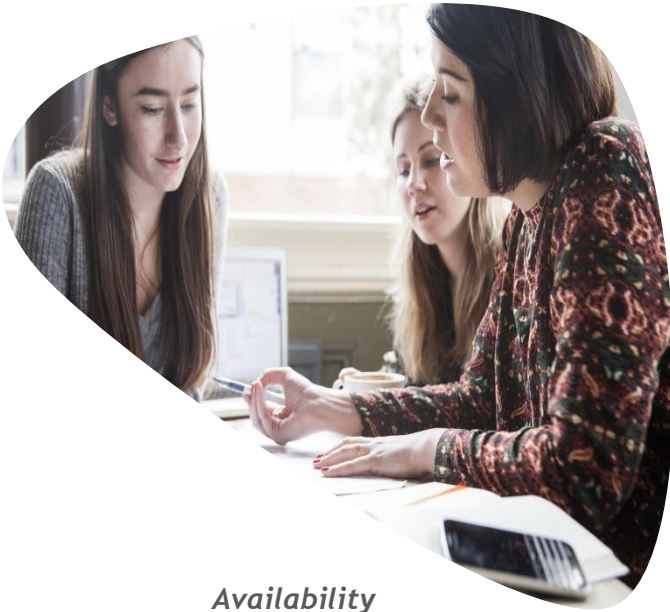
However, the Pakistan team members did work late nights as well on the pilot project and were in that sense more flexible in working hours in terms of putting in work/effort for the pilot project. There was a certain communication gap as a few times the task agreements were not fully understood in the same way between the Denmark and Pakistan team members – here it was good with an agile facilitator who quickly followed up on task execution and was able to align expectations and give out new tasks.



Work timings

The team members agreed working hours from 9 am CET time to 16 PM CET time. The Pakistan team members had to attend university during daytime and were online from 15 pm – 19 pm PST time. The entire pilot team was assembled from 12 CET to 16 CET. The Pakistan team members could work until evening/night. Hence if there were any obstacles the timing constraints did influence the resolve of these obstacles as availability was ensured once the team was gathered but once the team worked on their own they were not that quick to respond to immediate queries. According to Hofstede’s theory ([Country Comparison - Hofstede Insights \(hofstede-insights.com\)](https://www.hofstede-insights.com)) Pakistan is a collectivity society that tend to have more fluid relationship with time then Denmark. Due to social obligations such as weddings, funerals, birthdays etc. the Pakistan community demands more flexibility and based on that are used to odd working hours to meet deadlines e.g. until late night. In Denmark its more fixed working times and the balance between spare time and worktime is hence clearer





Skills

The skill for the pilot project was mapped out in the screening phase as teams to have the following skillset: Web development, Wordpress, Woocommerce, php, mysql, agile/scrum.

The Pakistan team members chose to use a free web server host for their website, that did crash due to increased user traffic and log-on problems resulting in delays in pilot team collaboration as the Denmark team members could not access the web server host to do development/designing of webpage.

We noted a skill gap as there was a lack of a UX web designer to design the website portal solution. Due to this skill gap there were many design talks within the team when designing the portal.

Availability

Furthermore, it was a pre-condition that both teams should dedicate full time working hours on the pilot project. 3 days into the project -Corona influenced the project as the universities were re-opened in Pakistan and hence our Pakistan pilot team members had to attend university during daytime which heavily impacted the day to day alignment and progress

Learning points

To identify the skill gap earlier to sort out a contingency plan for it. The daily stand-up meetings were good to follow-up and keep dialogue going in team also to follow-up on planned assignments and commitments despite the working hour constraints that were faced by the pilot team.

The agile scrum master should be one who can understand both cultures and hence adjust communication accordingly as the agile format is intense there is a need for increased understanding of cultures during the collaboration.

The agile format requires full time commitment however hence university obligations or other obligations does impair with work quality a bold and direct communication is very much needed if schedule is being pushed around by the hours during the agile sessions. To match equally experienced teams together or match technically unexperienced teams from Denmark with more technically experienced vendor teams from Pakistan.

Communication style

Initially there was also a communication gap between the women team members in the pilot team. The woman team member from Denmark was a technical profile and the woman team member from Pakistan was more commercial. Hence in Pakistan the communication seemed to be more hierarchical and adjusted as part of the designation one holds whereas in Denmark its flat communication style in terms of the project contribution. That initially was aligned and adjusted during the pilot project in terms of achieving common project target. In the pilot project team, it was evident in the team communication that the communication was were different between the Pakistan team members vs the Denmark team members.

The Denmark team members consisted of a woman and a male developer. The Denmark team members had a very informal communication style and working style as they knew each other's capabilities and weaknesses. Hence, they were very quick and good to assess the performance of new project tasks and suggest new solutions.

The Pakistan team members consisted of a woman and 2 male developers. Their communication style was formal and hierarchical between the Pakistan team members. It was the woman project member who was the owner of their start-up and initiated change request or new development tasks. The Pakistan team did not seem to be as in tune with each other's capabilities as the Denmark team members. Probably an obstacle was also the geological location as the Denmark team members were sitting in one location with good internet connectivity whereas the Pakistan team members the woman founder was sitting in a different location and the male developers were sitting in another location with often impaired internet connectivity.

Learning points

The teams should sit together in one geographical location in Pakistan, so the daily dialogue is improved, and good internet connectivity should be ensured for the daily stand up sessions.

Equally experienced teams should be matched in order for them to also be supportive of each other and sharing experiences and reflecting over desired approach.

The agile format does not allow that much discussions but is very target oriented which might be an obstacle for a collective society like Pakistan as decisions need to be taken rather quick. However, a learning point is to prolong the common work sessions to get more time together for the pilot teams to be able to share thoughts and approaches rather than working alone due to the timing constraints.

CONCLUSION

Denmark/Pakistan tech start-up pilot project was initiated based on numerous independent studies³ indicating harassment of working women as being a major issue in Pakistan impacting women engaging in workplaces.

The pilot project combined two tech start-ups between Denmark and Pakistan in the agile google design sprint format to develop a solution that will enforce a “women-friendly” working environment in IT sector of Pakistan and examine collaboration between two different cultures with IT as common denominator.

The learnings in the Denmark/Pakistan pilot project were that timeboxed conditions of the google-design sprint are fixed and require full time commitment. Changes to timeboxes and flexibility to push planned commitments around within the context of the google design sprint is limited although requires fulltime online presence and communication availability, hence a great internet connection is an absolute pre-requisite. For improvement of the communication level it's also vital that regional part of the pilot team is present in same location to interact actively in group discussions.

Pakistan team members were more unexperienced then the Danish team members and hence had a stiff learning curve in terms of tooling and quality/documentation delivery.

Hence as a result both Danish/Pakistan team members lacked to be supportive in task execution as one side had little experience, and the other side missed qualitative input dialogue on task execution.

Matching the right skillset and experience level for the pilot project was a challenge as the participants did not know which solution to develop before the initial brainstorming session prior to the pilot project.

During screening session DPEF mapped initial technical skillsets and experience that could be relevant pilot project. The skillset level was identified as a limiting factor in the retrospective evaluation session as there was a lack of a dedicated UX designer for designing the web portal.

However, a win-win was established in the pilot project team as both Denmark/Pakistan women team members came across cultural barriers and managed to align the different communication styles to focus on soft women issues in conducted pilot survey and focus group presentations. The final pitch presentation was conducted by the women participants of the pilot team adding value to the proposed whistle-blower handling system.

Having an agile facilitator with a Denmark/Pakistan background also helped the pilot project execution in adjusting the communication style and having a neutral and respectful dialogue throughout the exercise yet ensuring follow-up and progression on agreed tasks.

The DPEF pilot project can conclude that matching equally experienced teams together and identifying the right technical skillset level prior to the pilot project will be beneficial for this type of collaboration. Aligning



³ UK home office: Country Policy and Information Note Pakistan: Women fearing gender-based violence V.4 Feb. 2020. [In Pakistan, women's representation in the workforce remains low \(worldbank.org\)](https://www.worldbank.org)

on collaboration tools and ensuring full time commitment are also pre-requisites for success for the google design sprint collaboration format between Denmark/Pakistan.

A pre-requisite is also a good internet connection which is an absolute necessity along with being in one location for the group discussion sessions that would have given many informal inputs an improved cross-regional team communication.

DPEF pilot project also revealed that Pakistan societal backbones e.g. public and government institutions, research/development institutions and worker associations are somewhat immature in understanding digital innovation concepts and hence playing a proactive support role in industrializing IT innovation models.

Pakistan can learn from Denmark on building a community based supportive societal backbone where independent institutions are directly integrated in providing value to the industry clearly creating a competitive edge particular supporting IT and IT innovation models.

The detailed objectives of the Denmark/Pakistan pilot project and their status is illustrated below:

Detailed objectives of pilot project	Conclusion	Status
<ul style="list-style-type: none"> To promote collaboration of IT start-ups between Denmark/Pakistan and successfully established sustainable IT collaboration framework between Denmark & Pakistan. Furthermore, promote cultural exchange, IT entrepreneurship and innovation. 	The pilot project succeeded in adopting the google design sprint as a development process and ensured culture exchange and exchange of innovation skills between Denmark/Pakistan.	✓
<ul style="list-style-type: none"> Facilitate access for Danish IT and start-ups to a South Asian growth market in a manner that utilizes low-cost digital delivery infrastructure to efficiently optimize business gains. 	The format is low-cost with big scalability for Denmark start-ups to scale in Pakistan.	✓
<ul style="list-style-type: none"> Advise Pakistan IT start-ups and women entrepreneurs to grow, implementing knowledge of Danish innovation concepts/services and frameworks. Aid Pakistan IT and women led start-ups to become capable collaboration partners for Danish IT start-ups 	The pilot project did educate the Pakistan women led start-up on working methods/tools and concepts ensuring sustainable start-up collaborations.	✓

ABOUT DPEF

Denmark/Pakistan IT Entrepreneur Form (DPEF) is a not for profit Denmark based association that works to promote transverse tech innovation projects. The innovation projects involve tech and are focused on UN SDG goals involving Denmark/Greater Copenhagen, Pakistan, and UK tech ecosystems.

DPEF also bridges the gap between regional innovation and funding possibilities to ensure great sustainable ideas can scale on emerging markets.

DPEF ensures dissemination of knowledge on state-of-the art innovation between regions. A key focus area for DPEF is women entrepreneurships between ecosystems.

For more information about us visit our website on: <http://www.DPEF.DK>