Broad Adoption of AI by SMEs Report

November 2022 - GPAI Tokyo Summit

GPAI / THE GLOBAL PARTNERSHIP ON ARTIFICIAL INTELLIGENCE

Citation

Table of Tables

Table of Figures

1.   Purpose of Field Test

The purpose of the field test was to validate the usability of the AI4SME Portal ("portal") in matching SMEs and solution providers ("SPs"). Essentially, it was an opportunity to solicit relevant feedback on the portal features and the process of managing the portal by administering usability feedback surveys for SMEs and solution providers. The field test was participated by France, Germany, Poland, and Singapore ("field test participants").

2.   What Was Done Prior to Field Test

2.1.   Finalizing and localizing the portal template

It was critical to finalize the portal template with sufficient features to support matching between SMEs and solution providers. For example, AIMIND ("AI Maturity Index") and SPMIND ("Solution Provider Maturity Index") were created to support companies in either gaining better understanding of their AI readiness or to be listed on the portal. Other features included creating a way for SMEs to contact solution providers or solution providers to upload their company profile and AI use cases. The portal template was a good starting point for field test participants to localize the contents according to their countries' languages or contexts.

2.2.   Creation of the AI4SME Forum

The AI4SME Forum ("the forum") was a means to build a community of support for portal developers to share their issues as well as provide solutions to issues faced by other countries. On top of that, this was an avenue to link to different portals creating a network for SMEs or solution providers to tap on under the unique brand – AI4SME. Over time, this brand could be the global reference for SMEs or solution providers.

2.3.   Launching the field test with participating countries

With the support of the four participants, the SME Committee launched the three-month field test in mid-June 2022. To do so, participants marshalled resources for localizing the portal content and liaising with portal operators to manage the portal.

3.   Implementing Field Test

3.1.   Devising and implementing an outreach strategy to engage solution providers and SMEs

The outreach strategy that field test participants adopted was to reach out to their networks of SMEs and solution providers. Field test participants prioritized the outreach to solution providers in the opening phase of the field test. This was to allow population of solution providers and their AI use cases.

There were different modalities adopted in reaching out to SMEs and solution providers – organizing an information session and emailing. For example, France undertook the approach of organizing an information session for their solution providers that were part of their project, PackIA. Germany tapped on their existing network (i.e. AI Startup Landscape Germany) to send an email invitation to potential solution providers. Similarly, Poland utilized their AI Database by DigitalPoland Foundation and worked with the Artificial Intelligence Working

Group at the Chancellery to target a list of SMEs. Singapore collaborated with their portal operator, Singapore Polytechnic, to send emails to their close partners directly. These similar sources of companies aided the participants to engage the SMEs as well. The process of engaging SMEs and solution providers relied heavily on participants' existing connections that were pre-vetted by their quality review processes. This resulted in working with 63 reliable solution providers and 53 SMEs *(See table below for breakdown).*

Stages	France	Germany	Poland	Singapore	Total
Solution Provider					
No. of solution providers registered	24	10	13	16	63
No. of solution providers who took the SPMIND	20	8	11	13	52
No. of solution providers who did an interview	16	8	10	13	47
No. of solution provider profiles	15	4	1	9	29
No. of solution providers feedback forms submitted	6	1	1	5	13
No. of use cases uploaded	22	4	0	27	53
SME					
No. of SMEs who took the AIMIND	15	4	27	7	53
No. of SME feedback forms submitted	9	3	1	10	23

Table 1 - Aggregated Outreach Statistics

3.2. Managing and operating the portal

The portal operators shouldered the bulk of the responsibility of managing the portal. Besides targeting SMEs or solution providers for the field test, they had to work with solution providers to complete their onboarding process. They also reached out to SMEs and solution providers to submit their usability feedback.

4. Summary of Field Test Responses and Anecdotes

4.1. Top 3 positive feedback given by portal operators

Feedback 1: Use of dashboard to manage leads
Portal operators found it was easy to use the portal, specifically the dashboard, to manage their leads in a single view. Additionally, they found the workflow easy to understand.

Feedback 2: Ease and flexibility of setting up the portal
As the portal was built with a set of minimum features, the portal operator could focus on customizing the portal. The process of customizing and setting up the WordPress portal was deemed easy and flexible.

Feedback 3: Availability of email templates/guides
The email templates were a good reference for portal operators to send the relevant

emails to SMEs or solution providers with minimal changes. They also found it helpful to use the guides for understanding how to manage or customize the portal. Additionally, they could use the interview guide to standardize the interviews they conducted for solution providers.

4.2.   Top 3 negative feedback given by portal operators

Feedback 1: Translation
It was time-consuming as the automatic translation plugin was producing translations that were less than ideal. This required the portal operator to manually edit the language after the automatic translation was applied.

Feedback 2: Improving onboarding process
(i) It was laborious for solution providers, pre-approved by a recognized authority or government body, to complete the full onboarding process.

(ii) There was some heavy administrative follow-up that the portal operator undertook in nudging solution providers to complete their onboarding tasks. An automatic reminder email could free up portal operator's time to focus on getting more solution providers by sending reminder emails.

Feedback 3: Conformance to Web Content Accessibility Guidelines ("WCAG")
This could be a requirement to be fulfilled before the portal could be added to the domain in the context of a government website.

4.3.   Top 3 positive feedback given by SMEs

Feedback 1: SMEs were able and found it easy to find AI use cases
75% of the SMEs, which did the usability feedback, were able to find the AI use cases on the portal *(See Figure 15)*. It was also easy for the majority of the surveyed SMEs (83.3%) to find a use case *(See Figure 19)*.

Feedback 2: SMEs found AIMIND helpful
About 8 in 10 SMEs agreed that AIMIND was helpful in identifying their organization's AI maturity *(See Figure 21)*. It was also notable that 66.7% of the SMEs that responded spent 15 minutes or less to complete the AIMIND *(See Figure 22)*.

Feedback 3: SMEs found information within a short time
79.2% of the SME survey respondents was able to find the AI solution provider information in 5 minutes or less *(See Figure 24)*. 58.3% of surveyed SMEs took 5 minutes or less to find an AI use case *(See Figure 23)*.

4.4.   Top 3 negative feedback given by SMEs

Feedback 1: SMEs obtained irrelevant search results
SMEs found that the search engine is not sufficiently performant. For the search engine to return relevant results, the query word must be found in the use case description. Otherwise, the desired use cases could not be retrieved. For example, a SME was keen to find the use case about cars. The search engine however did not return car results if a synonym of the 'car' term was used (i.e. 'vehicle').

Feedback 2: Lack of mapping from AIMIND result to follow-up actions
Although AIMIND provided an insight into the state of AI within the SME, it did not offer the relevant interventions based on AIMIND classifications. There could be information for guiding SMEs to follow up after completing the AIMIND assessment.

Feedback 3: Insufficient materials for helping SMEs
The resources section was a good way to allow SMEs to elevate their understanding of AI. But the materials supplied today might not be sufficient. It would be ideal to showcase materials/references for AI beginners.

4.5.   Top 3 positive feedback given by solution providers

Feedback 1: SPs found SPMIND helpful
88.2% of the surveyed SPs concurred that the SPMIND was helpful in identifying their organization's capability *(See Figure 6).*

Feedback 2: Alignment of purposes between SPs and portal
The portal aimed to increase the awareness of the solution providers and their AI use cases and be a source of leads for solution providers. This was in line with the goals that solution providers wanted to achieve from the portal – marketing purpose (39.3%) and obtaining quality leads (60.7%) *(See Figure 2).*

Feedback 3: Complementary services amongst solution providers
The portal is also a place where solution providers could find partners with complementary services. For instance, the solution provider that provides an AI solution may work with a data annotation company.

4.6.   Top 3 negative feedback given by solution providers

Feedback 1: Long onboarding process for SPs
Solution providers found that the onboarding process – registration, SPMIND, interview and use case upload – to be lengthy. 64.8% of the surveyed solution providers took at least 15 minutes to complete uploading AI use cases *(See Figure 13).* Similarly, 70.6% of the surveyed solution providers took between 15 minutes to 30 minutes to complete registration *(See Figure 10).* This could be because there were too many fields to fill in.

Feedback 2: Too many onboarding tasks
The onboarding process was filled with many tasks and it was hard for solution providers to follow correctly. For example, they were confused as to whether they were required to complete AIMIND or SPMIND as part of the onboarding process. Solution providers were uncertain how to fill in certain context-specific fields (e.g. "funding", "AI maturity") in the AI use case template. Instead, they found it appropriate to put "not applicable" as an option.

Feedback 3: Unable to respond to all SPMIND questions
Not all SPMIND questions were applicable to solution providers. This was because the solution provider may lack the example/scale or it did not deal with the specific issues. So "I am not concerned"/"Not applicable" option would be appropriate. Solution providers found it difficult to evaluate their company in comparison to similar companies and this could be solved by having a reference paper or universal scale that the solution provider can refer to while completing SPMIND.

5.   Recommendations and Next Steps

5.1.   Improving outreach to SMEs and solution providers

Recommendation 1: Continue to leverage individuals' networks
The outreach strategy should encompass the component in which portal operators would be able to reach out to their networks of partners to form the initial base of solution providers.

Recommendation 2: Partner local agencies or associations
Beyond engaging familiar partners, it would be necessary to engage a wider audience that might be new. It would be helpful to work with government agencies or associations that might have their communities of companies seeking or building solutions.

Recommendation 3: Synergize the marketing efforts
Currently, individual field test participants make independent efforts in marketing the portal in their countries. To ensure the official launch on a grand scale, it would be appropriate to devise a global marketing plan and align all GPAI Members' marketing plans. Moreover, it would be ideal to build a common brand amongst the portals.

Recommendation 4: Difficulty in engaging SMEs or solution providers during the holiday period
It was notable that portal operators faced challenges in engaging SMEs or solution providers during the long holiday period. This could be avoided if the field test (if any) had been organized outside the holiday period. This same recommendation could be applied to the official portal launch period.

5.2.   Improving the portal

Recommendation 1: Enhance the portal operator dashboard
(i) Generate a flexible sorting mechanism within the dashboard. This would allow portal operators to sort the records by various sorting requirements such as "timestamp" (i.e. latest or oldest records first, or "company name" (i.e. alphabetical order).
(ii) Display "name" (i.e. the name of the company representative) in the SPMIND dashboard for a quick search. Because the portal operator liaised with the company representative directly.
(iii) Display 'Company Name' instead of 'username' and remove 'SP Email' column from the Use Case dashboard. Usually the portal operator would check if the solution provider uploaded the use case by their company name.

Recommendation 2: Reduce repeated filling in company information
The solution provider was requested to fill in company information during registration and before they uploaded the use case. The company information could be kept within the registration section and the information could be transferred to the portal page upon approval of the solution provider.

Recommendation 3: Translation
(i) The translation of the Formidable form content was less than seamless. For example, when changing the portal's main language from English to a non-English language, the Formidable form content remained in English.

(ii) The newly added non-English content could not be translated into English content resulting in missing solution provider's information.

(iii) Although a string translation tool supported the translation task, there were limitations, for example prices could not be translated smoothly between "$" and "Euro" and the string translation tool was not easy to use.

(iv) There was a difference in the information across languages and this affected respective SPMIND and AIMIND reports. It would be important to check for consistency of the information in the corresponding languages.

(v) It would be ideal to allow for showcasing the portal content in both English and non-English languages side-by-side.

Recommendation 4: Inclusion of a new SME dashboard
The portal operator required a dashboard to glean insights into SMEs that completed the feedback/AIMIND. This would be useful if it was permitted to collect identifiable company information of the SMEs (e.g. company name).

Recommendation 5: Refine the portal content to explain the purpose
There could be a short video (~1 minute) embedded in the home page of the portal. It could give a short introduction about the portal and how SMEs and solution providers could make better use or benefit from the portal. Another suggestion would be to set the top section in home page into two distinct halves where each half (belonging to either SME or solution provider) shows the question "Are you finding an AI solution?" or "'Are you providing an AI solution?" followed by short text (~2 to 3 lines) to explain the purposes. There would be a search engine and a registration link under the respective questions to prompt the SME or solution provider to use the portal.

Recommendation 6: Upgrade the search engine capability
The inclusion of a semantic search engine would offer a more accurate search result. This could be highly applicable to both use case or solution provider searches.

Recommendation 7: Include step-by-step guidelines
The guidelines could be used to facilitate interaction of SME/solution provider with the portal. It could be in the form of a single page infographics. It would offer how the SME or solution provider could use the portal.

Recommendation 8: Map AIMIND/SPMIND results to follow-up actions
It was a good starting point for the SME or solution provider to understand their maturity via AIMIND/SPMIND. It would be more fruitful for them to obtain relevant follow-ups in searching for the right type of solution provider or pointing SMEs to relevant resources. In addition, it would be pertinent to simplify the languages and/or add explanation on some AI concepts that might be applicable to the SMEs. For example, SMEs might be unable to tell the difference between using the pre-trained models and fine-tuned models.

Recommendation 9: Provision of images in use case pages
It would be ideal to allow solution providers to upload images (other than their client logo) to give the SME a quick visual understanding of the use case. This would lessen the possibility of displaying less attractive use cases (i.e. without images) in the use case pages.

Recommendation 10: Alignment of AIMIND and SPMIND classifications

The alignment would facilitate a relevant search for SMEs. This would allow solution providers to tag themselves using SPMIND results and SMEs could find an equivalent AIMIND classification leading to better match between SMEs and solution providers.

Recommendation 11: "Edit" and "save as draft" features for use case page
Solution providers often raised concerns over the need to create new button features such as 'edit', 'save as draft'. These features would allow solution providers to have the flexibility to continue filling in the use case information or edit the submitted use case when required.

Recommendation 12: Inclusion of uploading PDF documents or including video links
The inclusion of uploading PDF documents or including video links related to the use cases or company profiles could make it more attractive for SMEs to read. These could be materials (e.g. solution brochure, video demo) that solution providers use to market their company or product. Importantly, there would be fewer fields for the solution provider to fill in.

Recommendation 13: Approve solution provider without interview / assessment
There are government programs, such as Open Innovation Platform, in which they would have approved the solution provider based on their criteria. As such, solution providers would have been certified for their ability to provide solutions commercially. It would be sensible for these pre-approved solution providers to be listed on the portal without the need to undertake the onboarding process fully, by skipping the interview or assessment.

***Recommendation 14: Inclusion of automatic email notification***
An automatic reminder email could be sent to the solution provider to complete SPMIND at regular intervals (e.g. weekly) up to a certain point to reduce the portal operator's administrative load to nudge the solution provider to follow up on their onboarding. This could even result in an automatic closure of engagement with solution providers who did not follow up after *n* number of reminders have been communicated. It would be ideal that an automatic email could be sent to solution provider upon approval.

5.3. The timeline towards portal launch

The 3-month field test allowed for GPAI's SME Committee to look into feedback and recommendations so that the portal could be refined to better meet needs of both SMEs and solution providers. The subsequent follow-ups include prioritizing during the SME's Committee meetings, development of the second version of the portal, planning a joint marketing effort at global and country levels and recruiting more portal operators (on top of those recruited during the field test).
The timeline is an outline of the SME Committee's plan to launch the portal and this has been aligned with the concept note deliverables. *See below for an illustration of the timeline:*
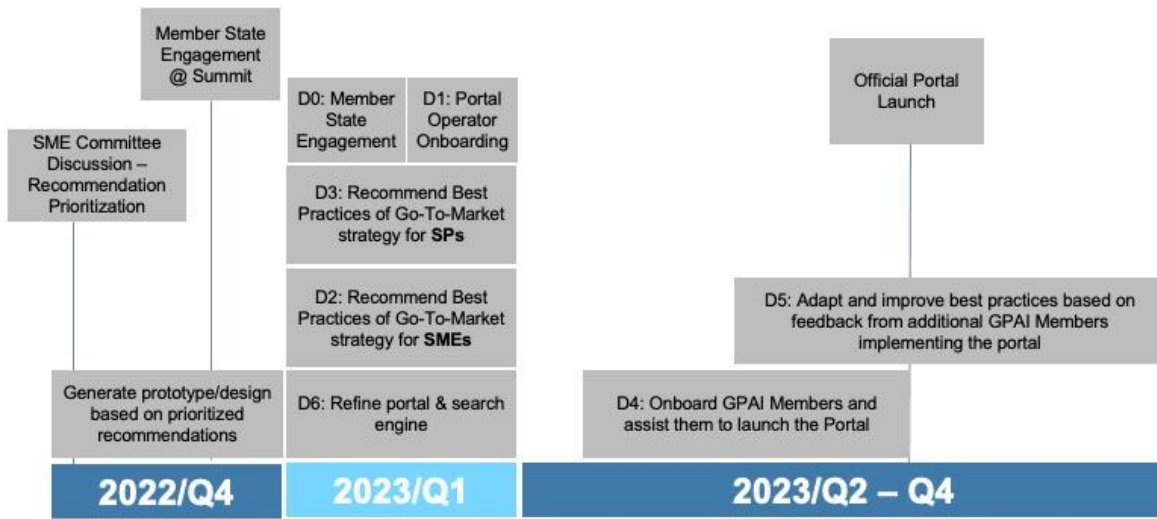
Note: Task denoted with Ds (e.g. D1, D2, …, D5) are deliverables indicated in concept note)

Figure 1 - Timeline

6.   Annex

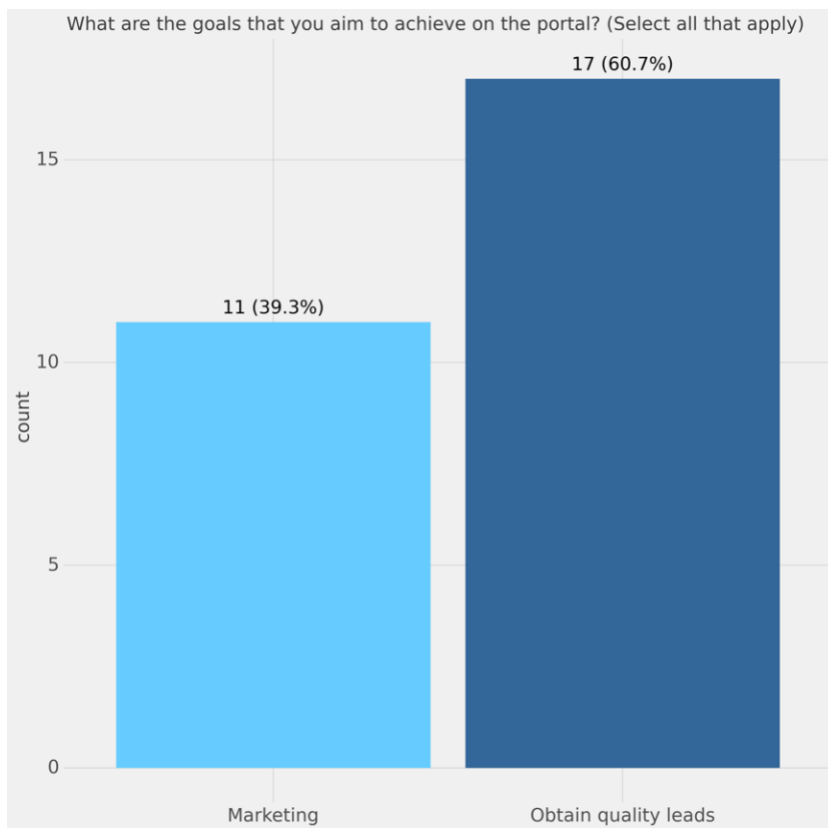## 6.1.   Solution Provider Usability Feedback Result

Figure 2 - SP: What are the goals you aim to achieve on the portal?
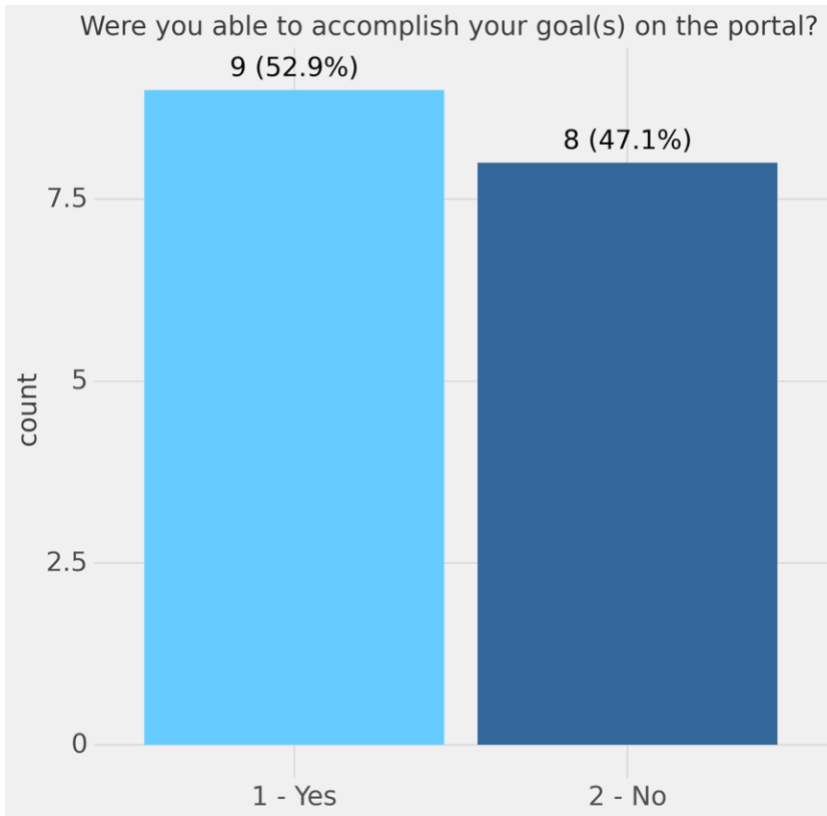
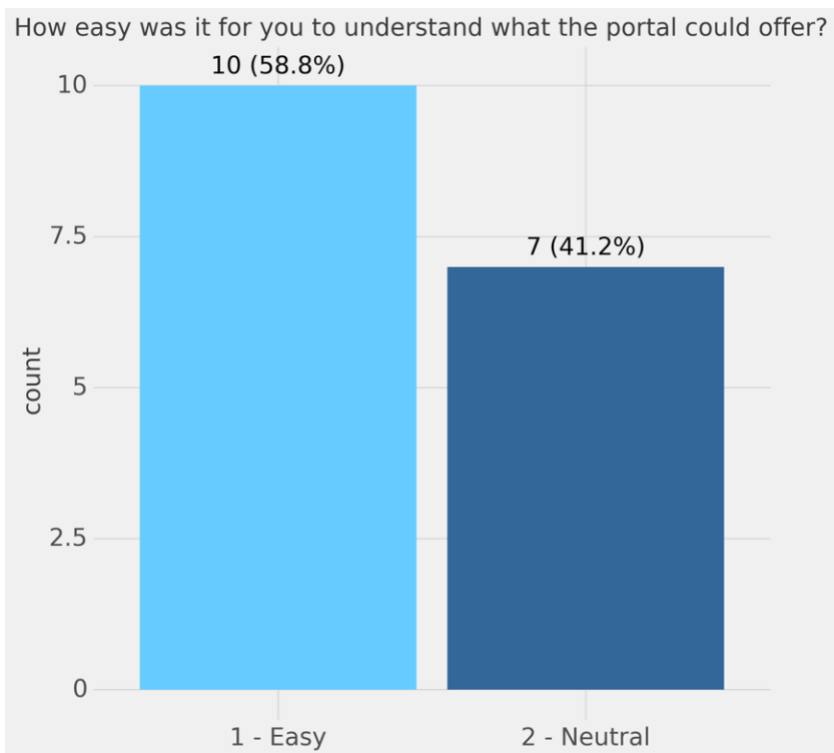Figure 3 - SP: Were you able to accomplish your goal(s) on the portal?

Figure 4 - SP: How easy was it for you to understand what the portal could offer?
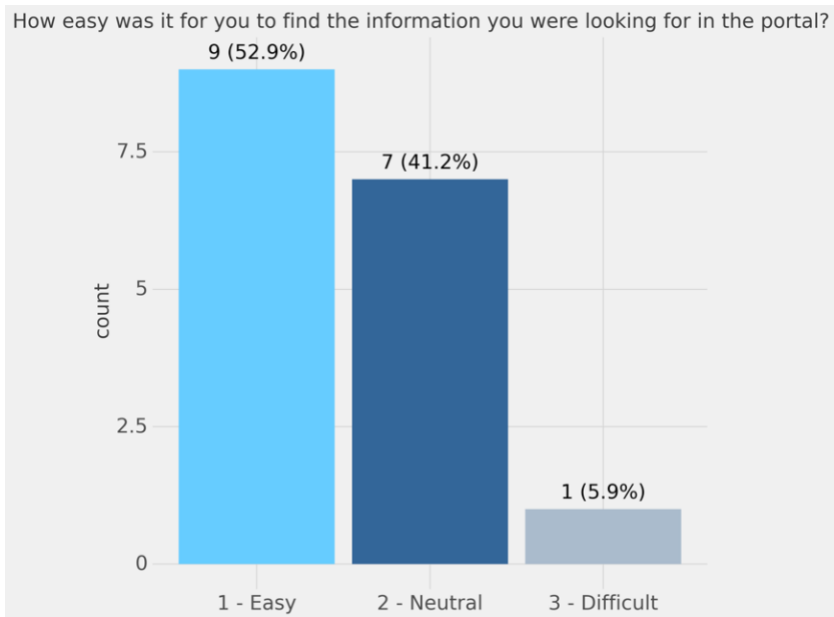
Figure 5 - SP: How easy was it for you to find information you were looking for in the portal?
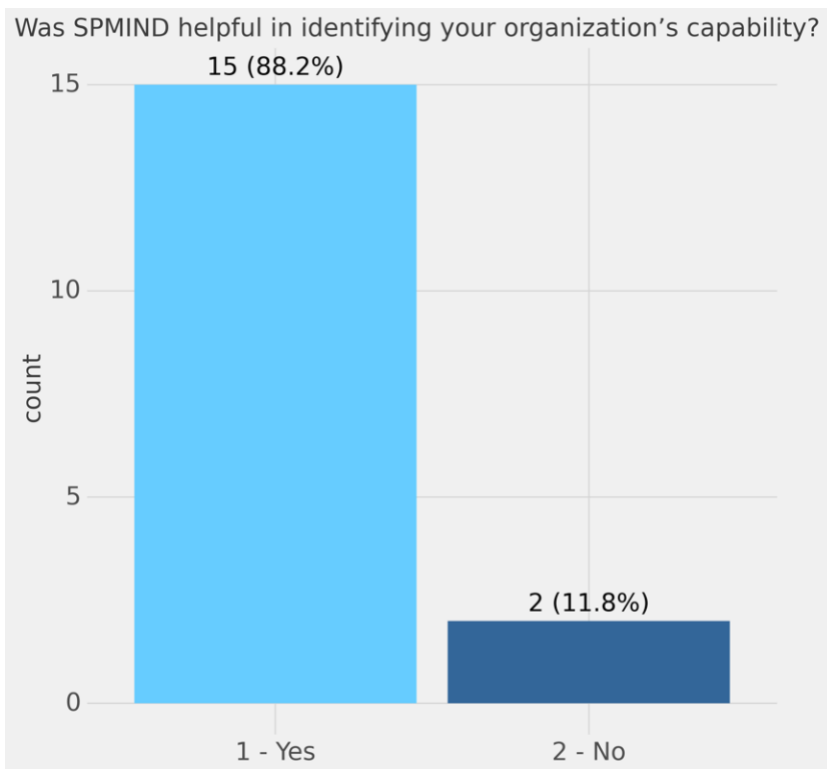
Figure 6 - SP: Was SPMIND helpful in identifying your organization's capability?
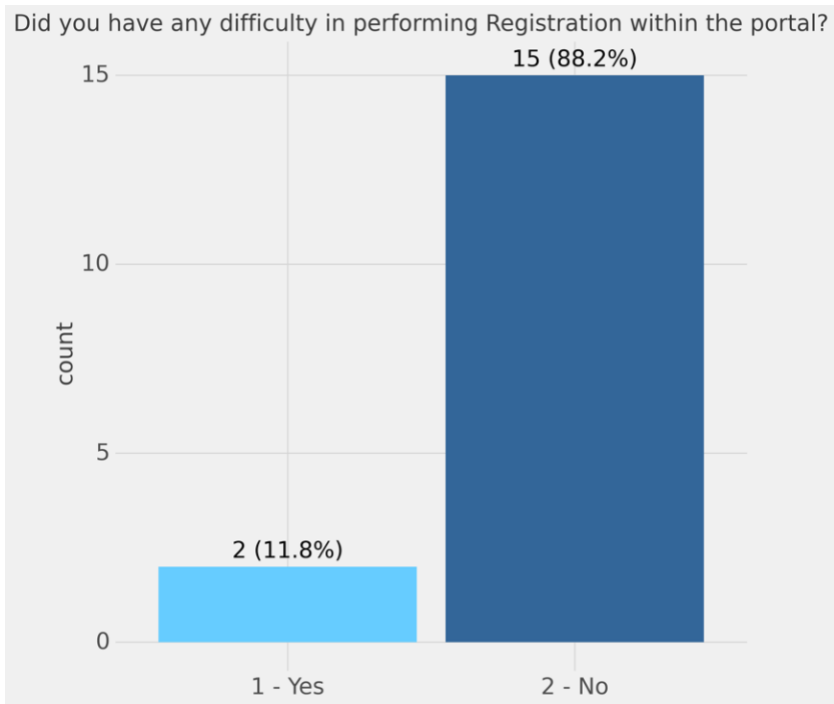
Figure 7 - SP: Did you have any difficulty in performing Registration within the portal?
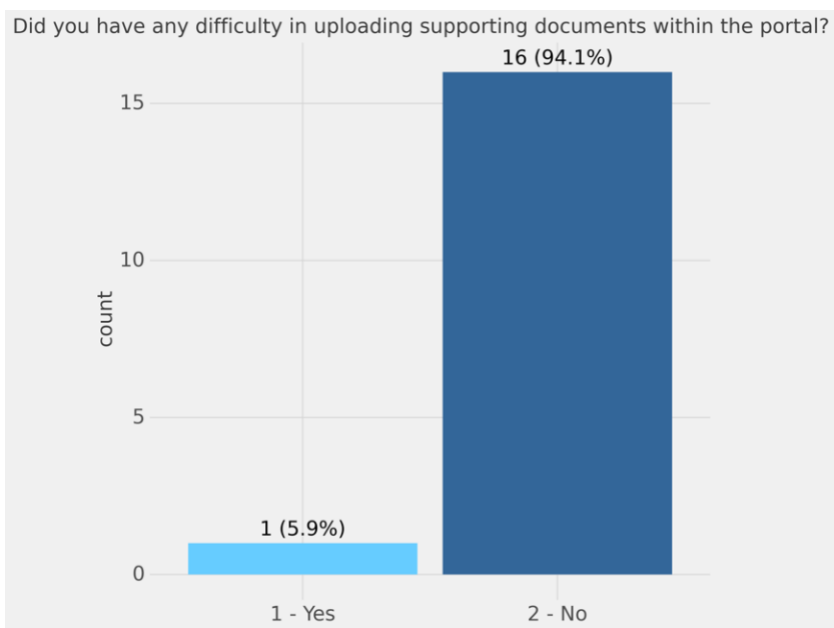
Figure 8 - SP: Did you have any difficulty in uploading supporting documents within the portal?
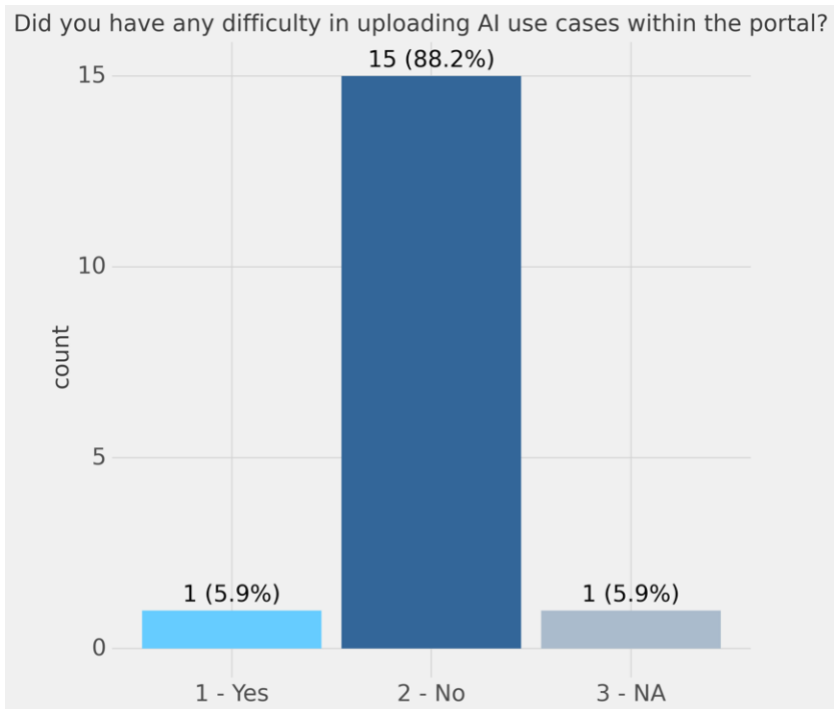
Figure 9 - SP: Did you have any difficulty in uploading AI use cases within the portal?
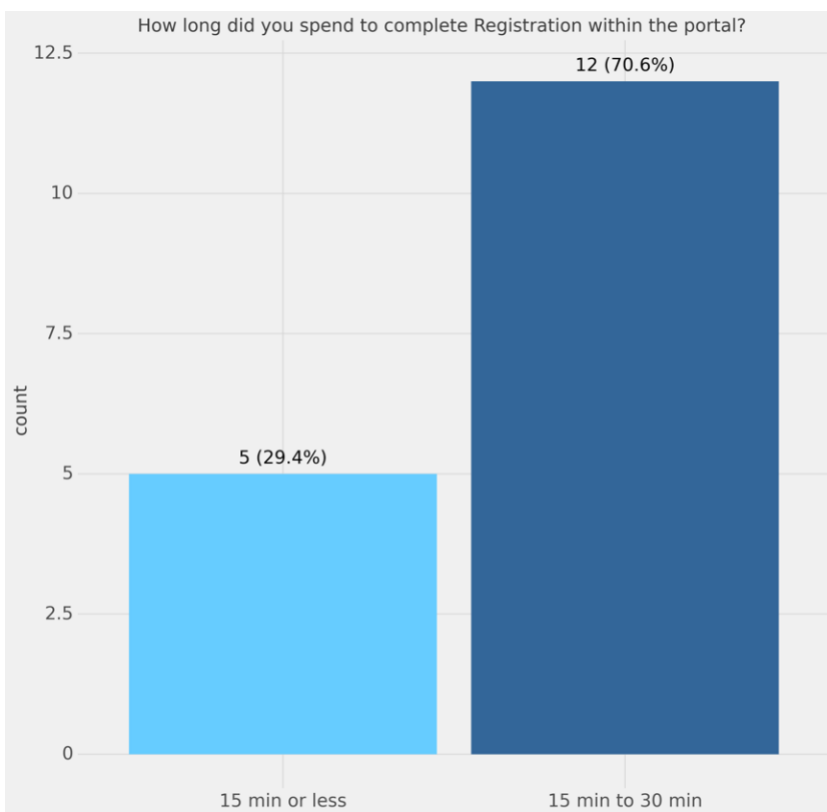
Figure 10 - SP: How long did you spend to complete Registration within the portal?
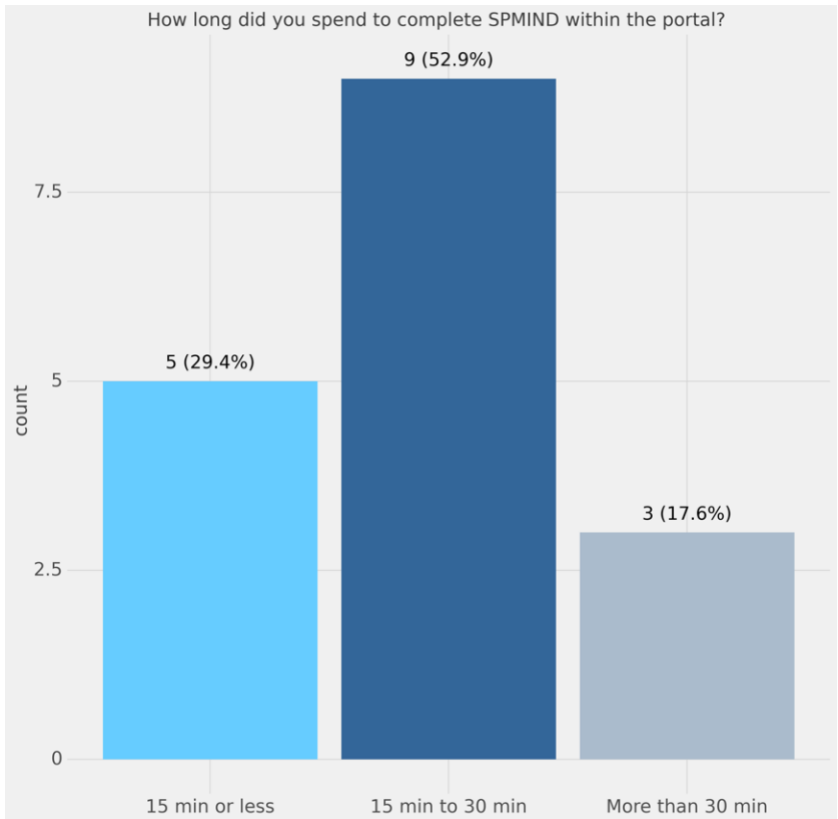
Figure 11 - SP: How long did you spend to complete SPMIND within the portal?
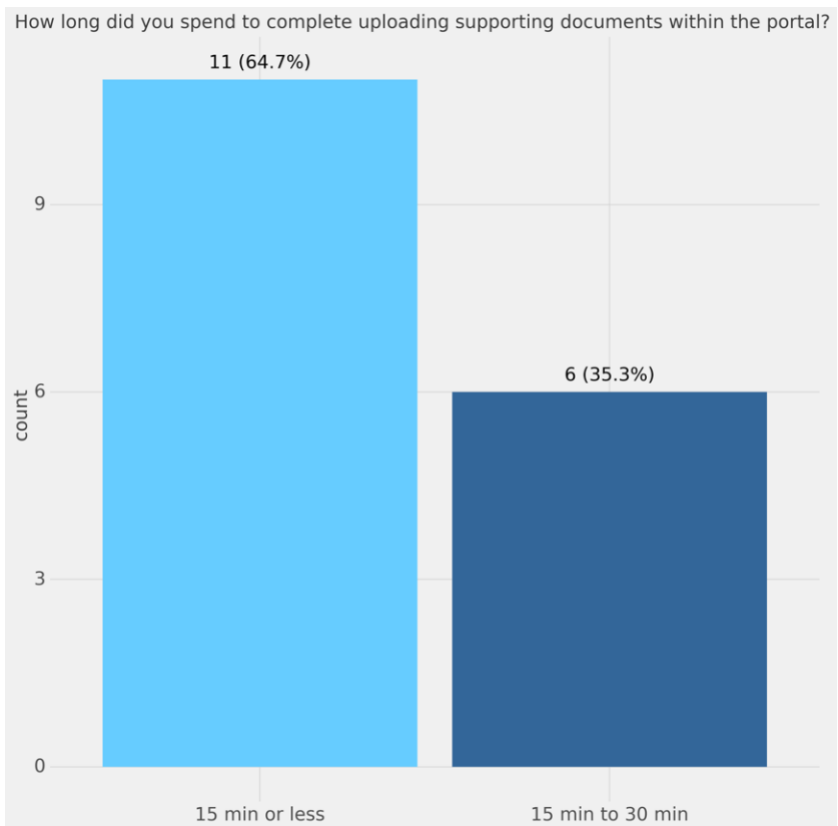
Figure 12 - SP: How long did you spend to complete uploading supporting documents within the portal?
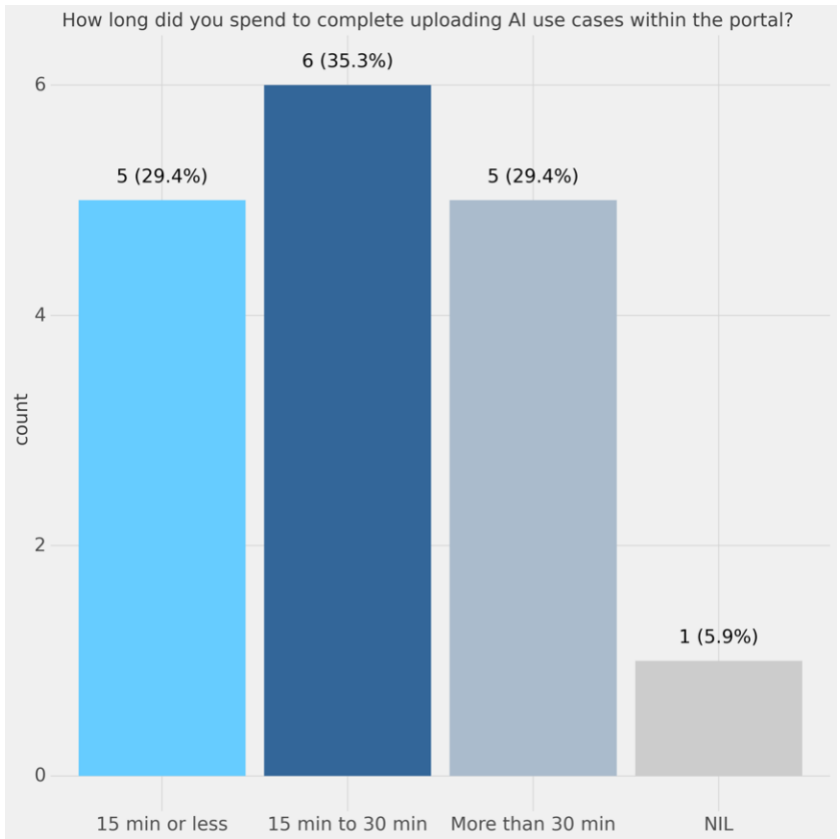
Figure 13 - SP: How long did you spend to complete uploading AI use cases within the portal?
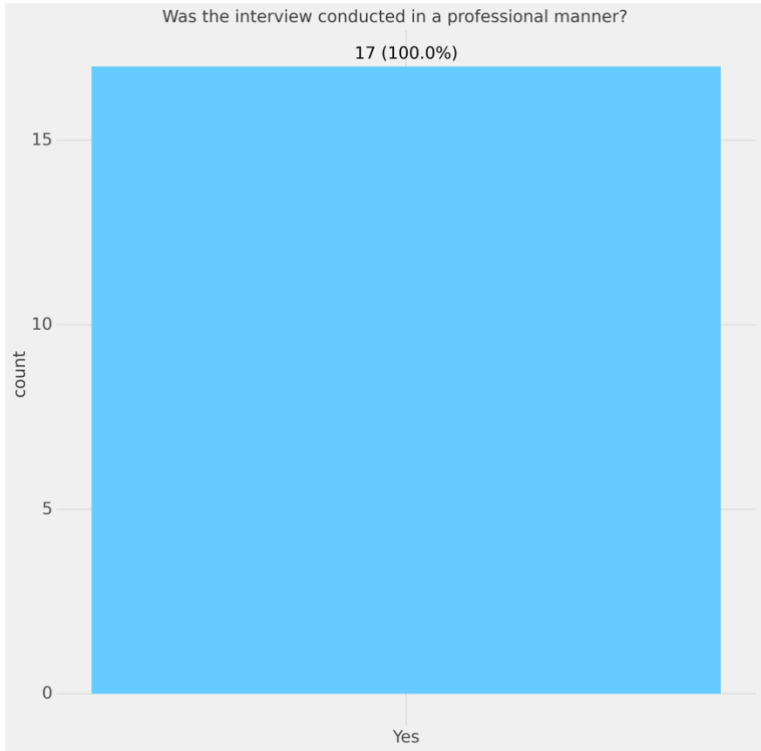
Figure 14 - SP: Was the interview conducted in a professional manner?

6.2.   SME Usability Feedback Result
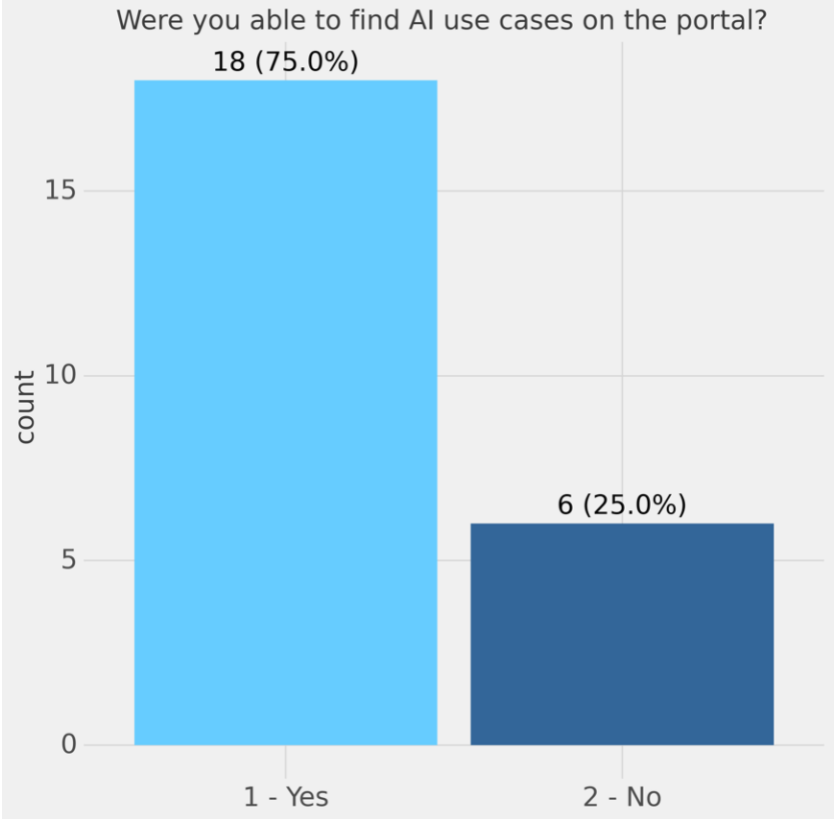
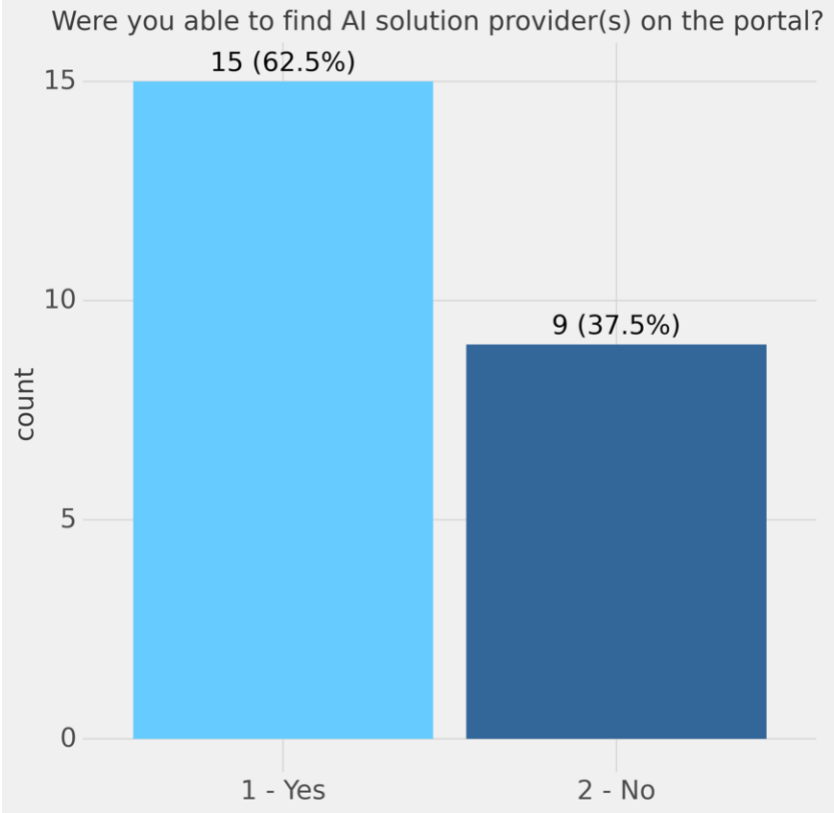Figure 15 - SME: Were you able to find AI use cases on the portal?

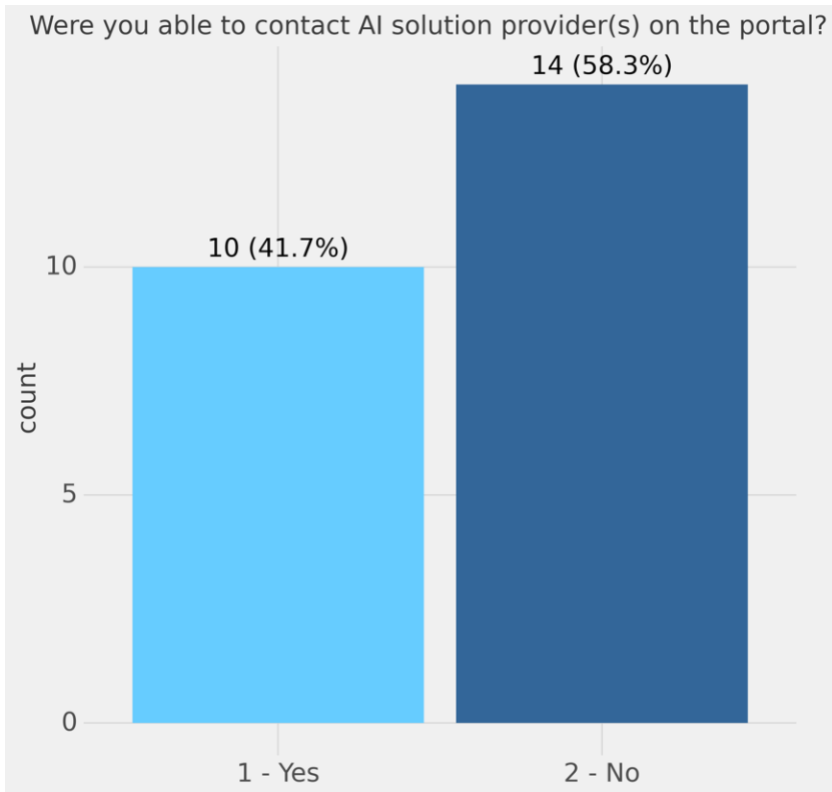Figure 16 - SME: Were you able to find AI solution provider(s) on the portal?

Figure 17 - SME: Were you able to contact AI solution provider(s) on the portal?
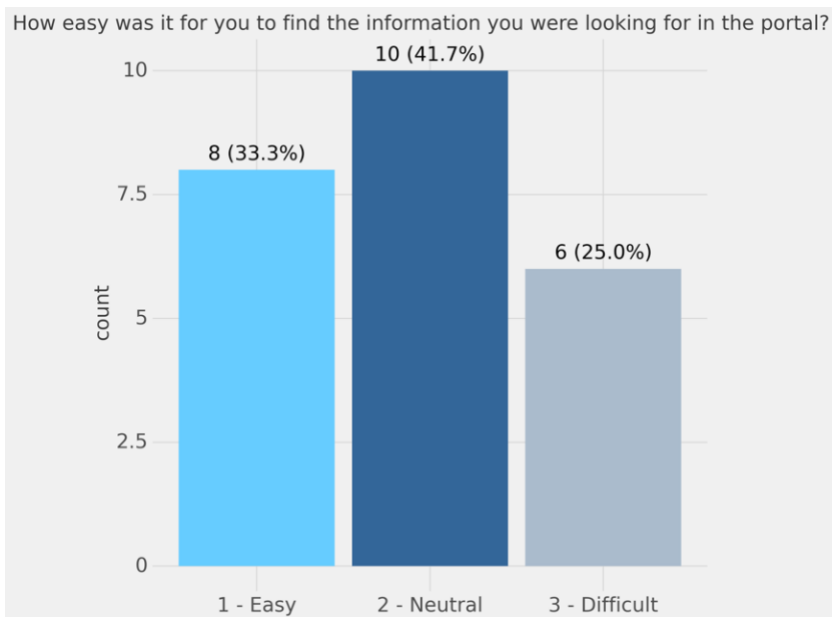

Figure 18 - SME: How easy was it for you to find the information you were looking for in the portal?
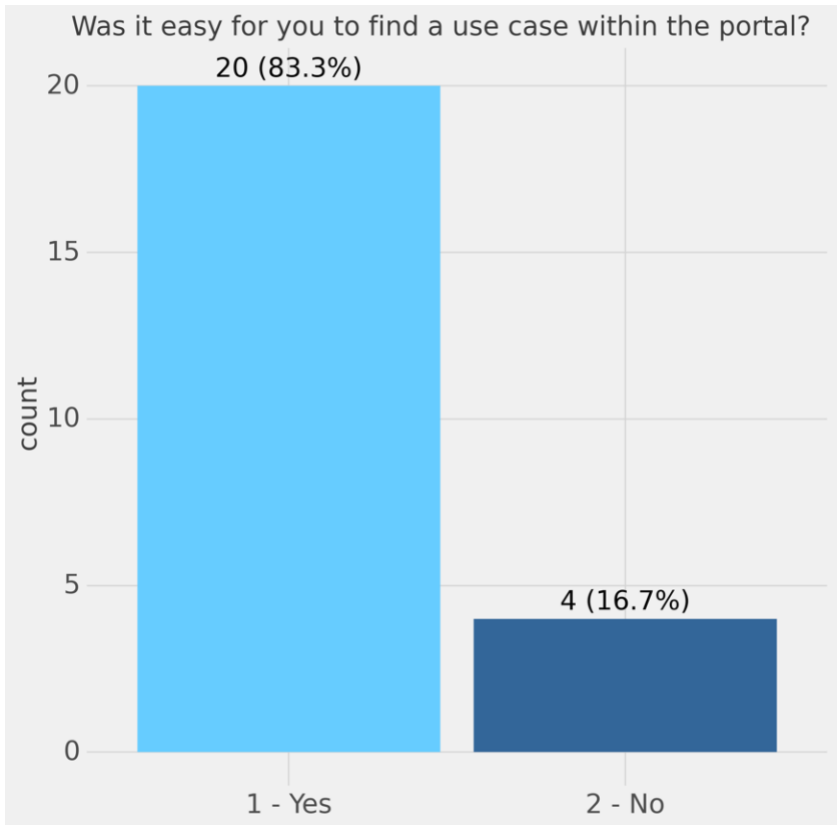
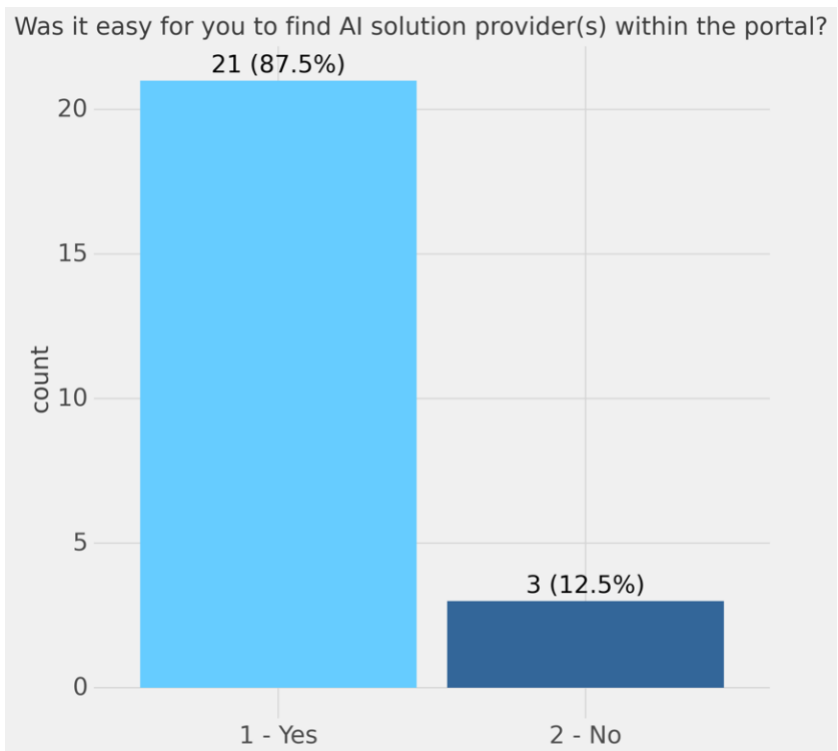Figure 19 - SME: Was it easy for you to find a use case within the portal?

Figure 20 - SME: Was it easy for you to find AI solution provider(s) within the portal?
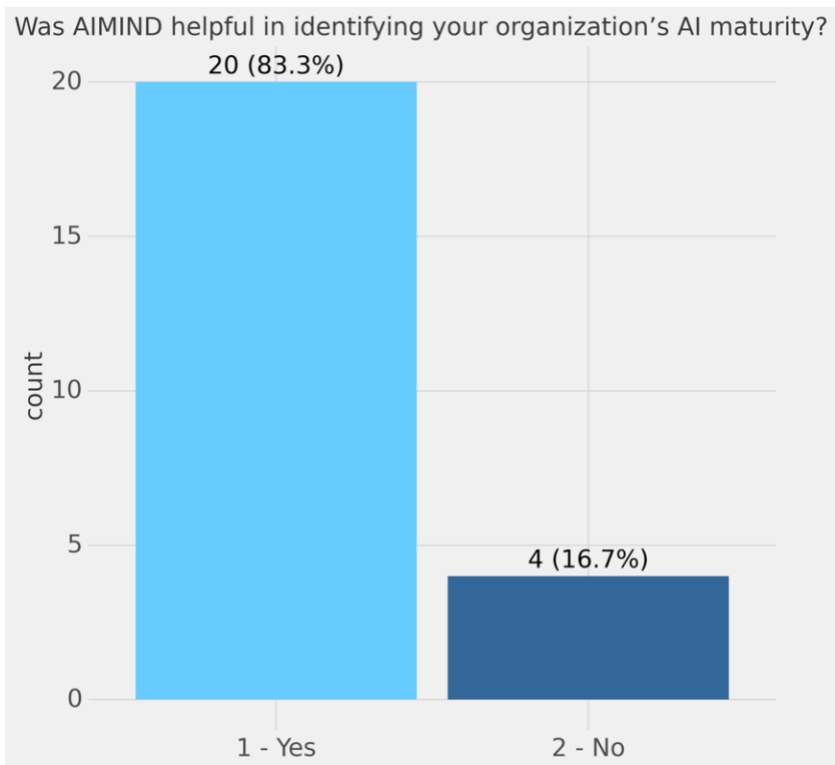
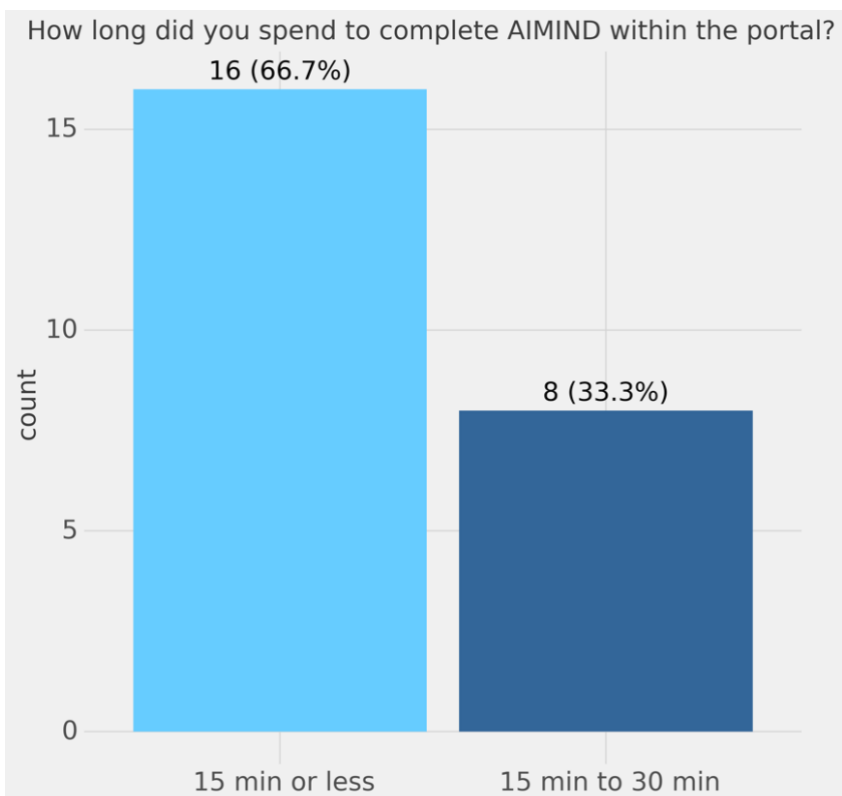Figure 21 - SME: Was AIMIND helpful in identifying your organization's AI maturity?

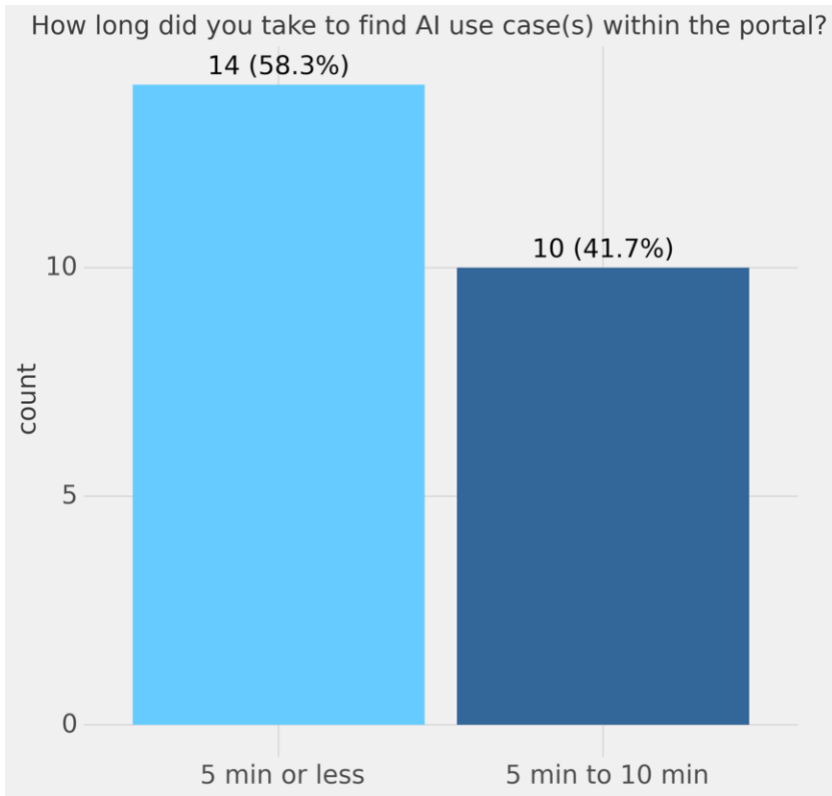Figure 22 - SME: How long did you spend to complete AIMIND within the portal?

How long did you take to find AI use case(s) within the portal?

Figure 23 - SME: How long did you take to find AI use case(s) within the portal?

How long did you take to find AI solution provider(s) information within the portal?
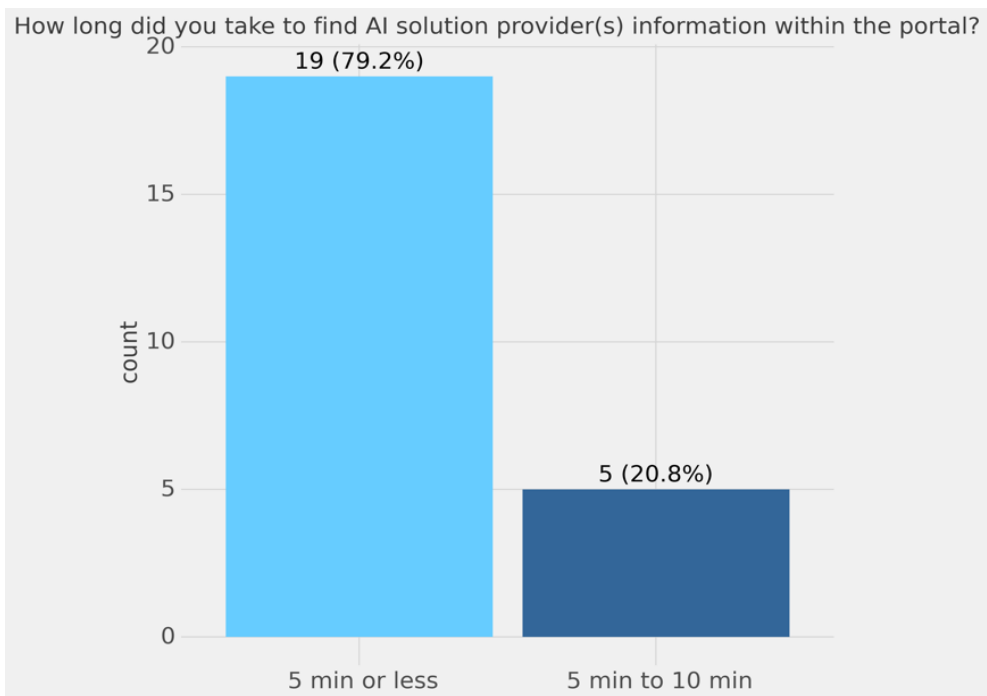
Figure 24 - SME: How long did you take to find AI solution provider(s) information within the portal