2. Five considerations while building AI systems for customer support

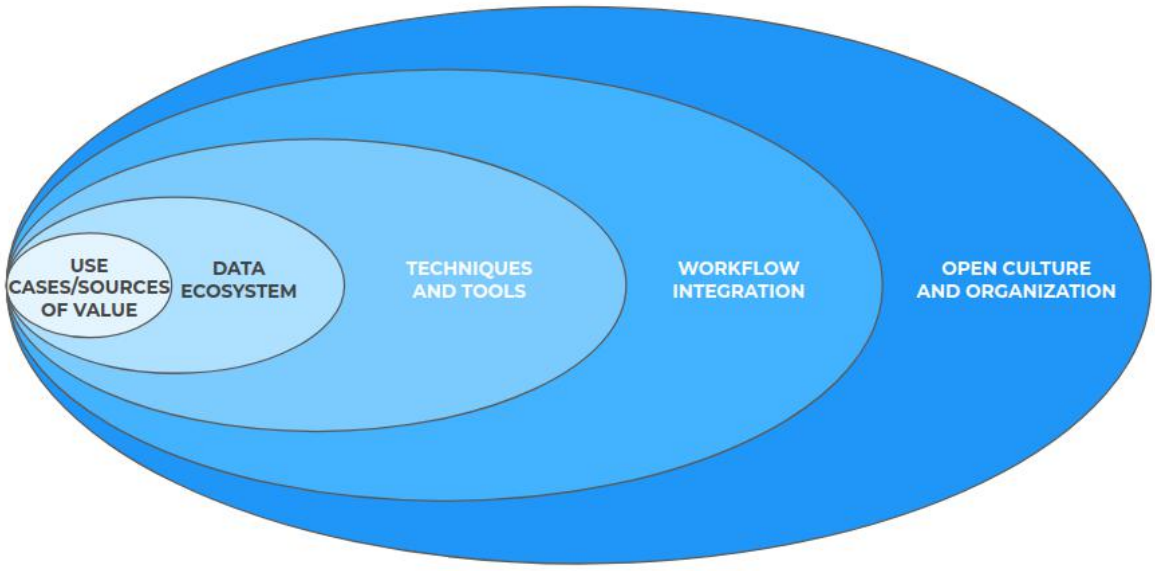

Figure : Five considerations while building AI systems, source.

Before building an AI system, a leader must contemplate some key points. Say, your company is solving a real world customer service related problem using AI systems. Some important question you should ask and answer before getting started with an AI project include:

- What does solving such problems mean for the company and customers?
- How do we gather the data required for building such a system?
- What are the processes and tools behind it?
- What's the sequence of the work and how do we integrate it within the existing system?
- How will AI system integration affect the company and employees?

"The age of analytics: Competing in a data-driven world" report by Mckinsey provides us with the five consideration model as presented in figure above. Let's discuss each section of this model in brief.

a. Use cases/sources of values

The first step to consider while developing an AI system is empathizing the problems it needs to solve for your company and customers. You should gain an empathetic understanding of the problem you're trying to solve, typically through user research. As a leader, think what value the AI system will generate for your customers. What are the use cases of that particular AI system in your company? Will it be a system that automates issue tickets? Will it be a system that replies the queries from the customers in a real-time? Will it be an automated system that can respond to emails? Or is it going to help customer service agents to find answers faster,reducing the time and resources. Remember, when building an AI system the first thing to do is:

- Scan the use-case of the AI system being built.
- Articulate business needs and create business use cases based on the system, if not directly apparent.

As Mentioned, you must think about what values the system is going to create for your end users. It could be the reduction in the issue resolution time, or an easier and seamless verification, or an optimal agent-customer call connection.

Next step is conducting ROI computation on the mentioned values, and analyse whether or not you should invest in the AI model you are planning to build.. This part is exigent as most organizations tend to invest in AI models without having prior knowledge whether they have required data sets or how to effectively train the AI model and the final ROI after the deployment. Business leaders need to have that vision and execute the same to get the best end value of the problem solving AI system.

b. Data ecosystem

It's mandatory to figure out the data requirements of the AI system being built. It's a well known fact now that ata is the key to developing AI systems. Hence **data collection is the primary step for developing AI systems** . You and your team need to figure out the data ecosystem, the interaction mediums within your company that generates data before discussing the algorithms you want to proceed with. Larger companies with multiple departments, have different databases

with wide varieties of data. Thus, collecting those data, processing it to be AI integrable becomes difficult. The leader must push the agenda of being able to get the data from different sources and reduce these barriers of making the data easily usable.

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Start by making a list of data requirements to be known, so that when the engineers start building the AI model, you have ample data in hand.

- Hence, consider answering these questions before building an AI system: How much data do we have?
- Where is the data source/database for the data collection?
- Which department should we contact for the data?
- Who has the capacity within that department to give the access to the data?
- What's the variety of data we have?

For a more elaborated questionnaire, visit the web article on "Determining data requirements" available on promodel.com.

For most large business conglomerates, data ecosystem management primarily concerns data identification, collection, and preprocessing across multiple departments. However, there might be a lot of red tapes around data access across departments. You, as a leader must:

- Break down data silos within multiple departments.
- Decide on the level of aggregation of all relevant data into a single place.
- Identify the key data that can boost performance of the AI system.

c. Techniques and tools

Following the data ecosystem management, one must look into tools and techniques required to develop the AI system. And by tools, we mean training the algorithms. Basically, we have divided the algorithms into three categories: data to score, data to classes and data to clusters. Based on the problem at hand, you need to figure out which one you will be working on.

For instance, if you're trying to rank the relevant information for customer service agents, you can use data to score. In case of classifying the complaint tickets or negative feedback you can use data to classes. If you're trying to automatically segment the customers among different categories, and cluster them together, then maybe you need to use data to clusters.

Summary Tips:

1. Identify the ML/DL techniques and tools that fit to solve your problem at hand.
2. Take an agile "test and learn" approach while building AI systems, for frequent updates and tests.

If you want to learn more about Agile development, visit this link by Atlassian on Agile development, where they discuss what an agile test and learn approach and why use it.

d. Workflow integration

When the algorithm models are ready, the next crucial step is to think of ideas on integrating the new system with the preexisting ones. Say, if you build a customer service system that helps your customer service agents to find customer data and resolve issues faster. If your overall customer service department is using Sales force customer service software, how do we integrate the new AI system to the sales force system?

There are so many other systems that get put in place as the organizations scale themselves, their workflows and tools. When you want to integrate an entirely new system which automates some components of the organization workflow, be aware of how your new workflow with the

AI system is going to impact your workflow, employees experience and your overall organizat ional goals.

Summary Tips:

- Integrate AI in workplace processes as much as possible to decrease cost, and save time.
- Optimize the human and AI system interaction points and working environment.

It's important to train and notify the people who're involved in this workflow about the changes being brought by the system, so that the system gets implemented at the end.

e. Open culture and organization

Lastly, once you have all your workflow integrated, consider how an organization takes implementation of AI from the cultural, organizational perspective, how open they are, and so forth. This is particularly important for the leadership at the executive level regarding coming up with mandates. If your company is shifting towards AI driven solutions, then follow these tips:

- Adopt an open and collaborative culture to promote the use of AI within the company.
- Circulate activities within the company that build trust between employees and the AI system and their insights.
- Train and reskill your employees on the built system.

A leader must capture the AI vision and execute the same by involving the employees and providing relevant things that are important to make AI accessible to everybody within the company. Doing so will make everybody on board and happy with the AI implementation. Consequently, there's less pushback from different parts of the organization.

> Visit pcmag's web article on "10 Steps to Adopting Artificial Intelligence in Your Business" for understanding progressive steps on adopting AI in your business.That's most of what you need to know regarding the five considerations model.