



# ASK EHS's Innovative Solutions Solved Sembcorp's Safety Complexities Entirely

## Need

- Streamlined Safety Processes
- Segregated yet Centralized Platform to Handle Both Energy Sectors.
- Futuristic and Sustainable Solutions
- Transparent and Secured Safety Systems

## The Challenges

Sembcorp faced challenges maintaining the same safety modules for renewable and conventional energy sectors. They had the same functioning but required distinct hierarchies, forms, and safety obligations.

- Hierarchy Difference
- Remote Areas Accessibility
- Safety Process Digitalization
- Distinct Safety Modules (CAPA and HIRA)
- Transparency and Data Security

## Our Client

### Sembcorp

#### Leading energy and urban solutions provider

Sembcorp has a successful track record of identifying, developing, and operating power generation assets across conventional and renewable energy sectors. They drive by a clear purpose of building a sustainable future. Their focus is growing their renewables and integrated urban solutions businesses.

## ASK EHS and Sembcorp

**Sembcorp wanted a standard and simplified safety plan while juggling the differences between conventional and renewable energy processes.**

With Sembcorp's expansion of the renewable sector, they needed to individually streamline safety processes for renewable and conventional energy sectors. Although the safety action plans are the same for both, there were noticeable differences that required specific attention.

Therefore to incorporate the safety processes according to hierarchies, locations, and definitive structures, Sembcorp approached ASK EHS. And our experienced team worked on the complexities (new and unknown) to provide Sembcorp with the most efficient and sustainable solutions.

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Sembcorp needed a comprehensive digital system for safety, but it required customized solutions for many aspects. Their related team came to us with unique challenges which needed unique solutions. They had specific demands, from segregating renewable and conventional energy safety processes to maintaining their records in the same system.



# The Solution

The ASK EHS team comprehensively designed solutions to decode every complexity of Sembcorp.

- Combined Hierarchies with Service-Wise Workflow
- Mobile App Integration with Offline Mode
- End-to-End Safety Digitalization Solution
- Design Safety Modules for Amplified Transparency
- Real-Time Tracking and Enhanced Data Security

## Hierarchy Difference

Sembcorp maintained a hierarchy for conventional energy (e.g., thermal) and renewable energy sectors. Conventional power required plant>> department>>location business unit hierarchy. But renewable energy requires a regional plant>> the main plant>>departments>>location business units. Thus, the challenge was incorporating regional locations in the digitalized systems and maintaining the processes hierarchy accordingly.

## Remote Areas Accessibility

When it comes to renewable energy, the remote locations are actually "very remote." These locations sometimes did not have even the slightest network. These areas could not even be given dedicated machines. Therefore the processes needed offline access along with transparent and secured procedures. The client also required the extra feature of security and commitment to ensure that safety processes were followed strictly in these locations.

## Safety Process Digitalization

Both the energy sectors had been following the excel based and manual paper systems. These needed to be replaced by digitalization for seamless and enhanced safety. Also, maintaining forms, feeds, and excel documents for renewable and conventional energy was taking a toll on the safety officers.

## Distinct Safety Modules (CAPA and HIRA)

Our client required a complete digitized safety solution, but they required different form generation for different modules due to workflow methods. The form may or may not have the same fields but requires individual generation for conventional and renewable sectors. And their CAPA and HIRA modules needed extra attention due to various aspects like remote locations, transparency, and time consumption.

## Transparency and Data Security

Our client handled multiple regional locations, and as said, some were really remote. Therefore the processes consumed lots of time and needed to be fool-proof. The higher authorities received the reports at a later stage and needed a method to cross-verify them. There was no real-time update or proof of what actually happened at the location. Also, there was a need to centralize all the different processes on a common platform.

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With almost two decades of experience, our team designed complete solutions for every complex challenge. We customized solutions according to their every need and demand. We ensured emails and notifications were generated at intervals, so tasks were completed on time and regularly intimated at every level.

Let us elaborate on each solution explicitly designed as they wanted the system to work.



### Combined Hierarchies with Service-Wise Workflow

The organizational hierarchies required unique integration. As mentioned, the renewable sector needed a regional aspect in the business unit hierarchy. Therefore, our team developed a solution such as conventional energy had the primary fields, and renewable energy required the remote location details as an add-on on the same UI.

### Mobile App Integration with Offline Mode

As network access in remote locations was very limited, we integrated offline access into the safety system. The safety officer could update information in the app, and the data got synchronized as soon as there was network access. This made real-time tracking possible and accelerated all the processes, thus saving time and resources.

### End-to-End Safety Digitalization Solution

Manual and Excel-based systems were creating havoc with the different safety processes. There needed to be more security, transparency, and proper tracking of required actions. Integrating digitalized safety solutions proved a valuable asset to generate, save and amplify the safety processes in the respective energy sectors. The consolidated data center with an interactive dashboard ensured easy access to data. All the files could be exported easily for slides, reports, or analysis generation.

### Design Safety Modules for Amplified Transparency

We designed almost 15 safety modules that generated different forms for conventional and renewable energy with the same feeds. But the two modules like CAPA and HIRA, required particular attention. For example, the HIRA form had different forms for both energy sectors; therefore, the necessary form was generated on selecting the specific choice.

Likewise, CAPA was a critical aspect. When a safety officer visited a remote location, their word of mouth or manually filled form was everything to tell about the CAPA investigation and actions. CAPA execution had a lack of evidence for completion. Therefore particular attention was paid to generating a transparent solution.

Our team designed the CAPA module so that it strictly required the concerned person to record the pictures and fill in the comments as per the action plan. Once the images were clicked, the system auto-generated the longitude and latitude of the images' location. Thus, this assured the authorities that the required action was carried out properly in the desired location.

### Real-Time Tracking and Enhanced Data Security

With the integration of a mobile app, real-time tracking became easy. It was a two-way street for checking, updating, and escalating safety issues. The method generated quick responses and saved much time. The entire digitized safety system solved the problems of the conventional and renewable energy sectors while generating different forms and streamlining processes yet maintaining a centralized platform for data. This amplified data security and accelerated all the actions related to safety with compiled measures.

## The Conclusion

We helped Sembcorp to streamline processes, report in real-time, manage corrective actions, and increase transparency and visibility by consolidating data into one central repository.

The digitalization process enabled Sembcorp to perform time-consuming tasks innovatively. ASK-EHS's team made complex processes simple, user-friendly, efficient, and versatile. Our team will definitely help them to achieve the company's vision of implementing sustainable strategies with unparalleled technology.