SUNRAY WOODCRAFT CONSTRUCTION
HEADQUARTERS

DESIGNED BY:
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CLIENT
SUNRAY WOODCRAFT CONSTRUCTION PTE LTD

CIVIL & STRUCTURAL ENGINEER
DP ENGINEERS PTE LTD
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1. **ELEVATOR PITCH**
   In 50 words, give us a short description of your project.

Sunray Woodcraft Construction Headquarters, an eight-storey industrial building that imaginatively redefines the light industrial factory type. An integrated hybrid design for a diverse range of users, its compact, efficient and seamless spatial planning has enabled it to achieve greater business efficiency.

2. **BASELINE AND BRIEF**
   What were the objectives of the project?
   What was your client or design brief? What were the latent needs for the design/project? What were some opportunities that your client wanted to create? Tell us also about what the situation was like before you intervened, i.e. the starting point or baseline. These could be in terms of pain points, customer insights, etc. What were some project limitations you had to overcome?

The original brief called for an office building with an attached factory, complete with gallery showrooms and workers’ dormitories, to replace the existing headquarters in Singapore and existing factory in Johor Bahru. This merging of two elements of the factory's production process and originally separate uses prompted a rethink of the spatial arrangement and workflow of the eight-storey building, which now comprises production space, workers’ dormitories, warehouse, offices and showrooms.

The headquarters provides a base for the Sunray group and is designed to reflect the company's design and craft expertise. Its design was driven by three challenges – namely, a wide range of user requirements, the client's ambitious requirement for increased space and the unique position of the site within the estate, highly visible from passing train tracks.

3. **DESIGN INTERVENTION**
   i. What was the design ethos for the design/project?
   What was the thinking/philosophy/principles/beliefs/values that framed your design/project?

The design for Sunray Woodcraft Construction Headquarters is anchored in the bifurcated notion of tropical architecture and industrial space, and considered the needs of three separate groups of users – namely, showroom and office visitors, staff and workers. This is to ensure a seamless flow of spaces, easily navigable volumes and efficiently planned areas for the movement of human traffic, materials and finished products.
ii. What was your design process or approach?
How did you carry out and execute the project? Tell us how your process or approach is human-centric, innovation-driven, co-
creation-driven, and supported by rigorous research.

The overall building form comprises 11 boxes, each reflecting the different stages of production and identified by the very specific needs of the spaces within them – resulting in the building’s most striking feature, its yellow louvered façade. Horizontal aluminium louvres, flooding spaces within the maximum amount of natural ventilation and light while remaining shaded from the sun and protected from the rain. Deep recesses between boxes create intuitive points of entry and exit for each box while allowing natural light to penetrate deeper into the floor plate. Office spaces are clad in closely spaced vertical aluminium louvres, shading the interior spaces and maintaining a view to the outside. The showroom box is clad in concrete – a contrast to the yellow boxes that make up the rest of the building. Its large picture window further highlights the furniture on display and creates a focal point to two sides of the building facing the train tracks.

A seamless workflow of spaces, easily navigable volumes and efficiently planned areas are designed around the movement of materials, finished products, as well as three separate user groups, namely – the showroom and office visitors, staff and dormitory workers. The building experience for each group is carefully planned with the user’s requirements driving the design. For example, contiguous floor space between production zones and dormitories allow fast and easy access for workers. Dormitories are stacked utilising the high ceiling height for the factory areas. Production processes have also been stacked within one site to maximise working conditions. This bold move demonstrates how industrial factories can operate optimally without sacrificing design.

Responding to the needs of the interior spaces, the building skin envelopes each space with the suitable exterior skin needed, with large horizontal openings for ventilation and light for production spaces, smaller vertical openings for office spaces and an enclosed box for the controlled light conditions of the showroom. A perfect synthesis of design and client’s requirements, the building is a striking statement on the efficiency and pride the client has in their craft, raising the bar for similar development types in the surrounding Sungei Kadut area.

4. WHAT IS THE OUTCOME(S) OF YOUR DESIGN/PROJECT?
What was your outcome(s)? How well have you met or surpassed your objectives?
If your project has just recently been launched/ completed, can you tell us about early signallers of success?

1. ENABLING ECONOMIC TRANSFORMATION
   • Increase efficiency of workflow
   • Save operating cost for the company
   • Enhance brand reputation for client

2. RAISING QUALITY OF LIFE
   • Time savings
   • Provide a better working and living environment
   • Increase in sustainability and improved environmental impact

3. MAKING GROUND-BREAKING ACHIEVEMENTS IN DESIGN
   • Introduce a new typology that can be adopted
   • Integrate well into the environment through climatic responsive design
5. HOW DO YOU KNOW HOW WELL YOU’VE DONE?
Please provide available supporting evidence, for e.g. quantitative, qualitative and/or empirical evidence and sources that are relevant to your claims in Part 4.

1. EVIDENCE FOR INCREASED EFFICIENCY IN WORKFLOW AND SAVINGS IN TIME AND COST
The resulting dynamic flow of these facilities has allowed the factory to handle a range of projects including custom-built jobs and interiors for large hotels.

In the Business Section of The Straits Times, it is reported that with the new building and “streamlining of Sunray’s operations, the company has effectively saved hundreds of truck trips per month and reduced their manpower requirements on the factory floor, thus doing more with less’ and “has the potential to minimise its operational costs by 70 percent.”

2. EVIDENCE FOR ENHANCED BRAND REPUTATION
Client Testimony: “The goal was for the building to set the standard as a landmark of the area. The challenge to marry design with practical needs was met in several ways. The tasteful use of yellow pays homage to the company’s corporate colours, while setting new design precedents within an aesthetically harsh industrial estate. Production processes have also been stacked within one site to maximise working conditions. This bold move demonstrates how industrial factories can operate optimally without sacrificing design.”

3. EVIDENCE FOR A BETTER WORKING AND LIVING ENVIRONMENT
• BCA Green Mark for Buildings Award 2015
• Client Testimony: “Volumes are easy to navigate and efficiently planned so that spaces flow seamlessly from one to the next. This supports the quick circulation of materials, finished products, and the three user groups: visitors, staff and dormitory workers. The resulting dynamic flow of these facilities has allowed the factory to handle a range of projects including custom-built jobs and interiors for large hotels.”

4. EVIDENCE FOR INCREASE IN SUSTAINABILITY AND IMPROVED ENVIRONMENTAL IMPACT
• BCA GREEN MARK FOR BUILDINGS AWARD 2015

5. EVIDENCE FOR MAKING GROUND-BREAKING ACHIEVEMENTS IN DESIGN
• SIA ARCHITECTURAL DESIGN AWARD 2014