

# DIT - DPD INTERGRATION

## Choice Architecture: Nudging Toward Positive Behaviour

Choice Architecture, rooted in behavioural economics, is a principle that involves designing environments that guide individuals toward making beneficial decisions without limiting their freedom (Thaler & Sunstein, 2008). Popularised by Richard Thaler and Cass Sunstein in their book *Nudge* (2008), it suggests that small, intentional design decisions can significantly impact behaviour. By setting up *choice environments* where beneficial behaviours are made easier or more appealing, individuals are nudged toward positive actions.

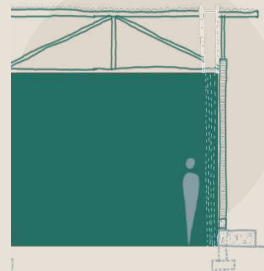
In the MYDO Hub, this principle directs residents away from negative behaviours, such as substance use, by strategically guiding them to positive spaces like the Makerspace and Bridging Facility and away from the tavern. Pathways lined with inspirational artwork, cheering from the sport field and the hum of the makerspace gently nudge individuals toward enriching activities. For example, market days are scheduled to coincide with peak community activity, subtly steering focus toward social and economic engagement. COSUP's rehabilitation expertise also ensures the space supports emotional recovery, creating an environment conducive to both healing and growth.

## CHOICE ARCHITECTURE TOOLS



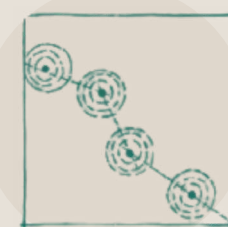
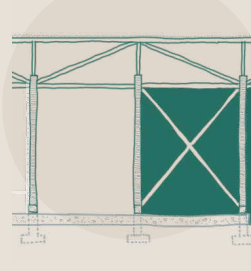
### NUDGES

LIGHT TO GUIDE  
SUBTLE CUES



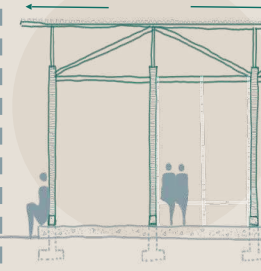
### REFRAME

TAVERNS  
BOUNDARY  
INTERFACE  
ACCESS



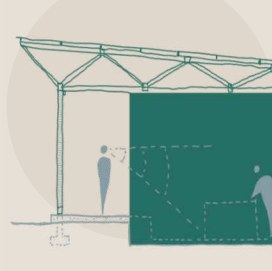
### SCALABILITY

NOW | SOON | LATER  
TIMING (INCREMENTAL)  
SIMPLIFY



### FUN!

COMMON SPACES  
AMENITIES  
INTRIGUE



# DIT - DPD INTERGRATION

## CORE DESIGN PRINCIPLES

### Nudge | Encouraging Positive Behaviours

Guided by *Choice Architecture*, the hub's layout gently directs residents toward productive activities, such as workshops, communal spaces, and markets, by positioning these spaces to be both accessible and inviting. Pathways with inspirational artwork and subtle design cues encourage engagement in skill-building and social interactions, providing natural alternatives to negative behaviours, like substance use, without restricting freedom.

### Craft | Celebrating Local Knowledge and Sustainable Materials

Craftsmanship lies at the heart of the hub, using sustainable materials like reclaimed wood and adobe that resonate with Melusi's industrial history. Spaces like the Makerspace highlight traditional skills—carpentry, weaving, and brick-making—fostering cultural pride, intergenerational knowledge transfer, and economic empowerment, while also reducing environmental impact.

### Well-being | Holistic Community Wellness

Each aspect of the hub promotes physical, mental, and emotional well-being, incorporating spaces for relaxation, creativity, and social connection. Elements like natural light, greenery, and open courtyards support wellness, while dedicated therapy and skill-building spaces offer mental health support and a sense of purpose, aligning with HSD principles.

### Safety | Secure, Inclusive, and Multi-functional Spaces

Safety is a foundational principle, with well-lit pathways, open sight-lines, and secure areas that ensure residents feel protected. By creating an environment that fosters trust, the hub becomes a safe, inclusive space where individuals can engage in personal development and social activities, strengthening community bonds.

### Incremental Growth | Adaptive and Responsive Design

The design concept incorporates an incremental approach, beginning with temporary structures and evolving based on community needs and engagement. This adaptive growth aligns with PID principles, as it allows the hub to develop organically with ongoing community input, ensuring long-term sustainability and relevance.

Through these guiding principles of nudge, craft, well-being, safety, and incremental growth, the MYDO Regenerative Hub goes beyond a physical space, embodying a movement for regeneration and positive change. It provides Melusi's youth with pathways toward empowerment and resilience, creating a supportive environment where they can break free from cycles of substance use and build a hopeful future.

## INTEGRATING PID, CHOICE ARCHITECTURE, AND HSD

Together, these frameworks support the MYDO Hub's mission to create an environment that empowers Melusi's residents to thrive. Choice Architecture shapes the physical and social layout to encourage constructive choices, HSD ensures that all aspects of human well-being are addressed, and PID grounds the project in the community's values and voices. This holistic integration results in a space that not only meets immediate needs but also fosters long-term community resilience, health, and growth.

DESIGN PRINCIPLES	NUDGE	CRAFT	SAFETY	INCREMENTAL	WELL-BEING
DESIGN CRITERIA	<ul style="list-style-type: none"> <li>Spatial agency</li> <li>Flexibility</li> <li>Choices</li> <li>Order</li> <li>Circulation</li> <li>Subtle cues</li> <li>Tempo</li> </ul>	<ul style="list-style-type: none"> <li>Making</li> <li>Aesthetic</li> <li>Inclusion &amp; engagement</li> <li>Appropriation</li> <li>Colour</li> <li>Acoustics</li> </ul>	<ul style="list-style-type: none"> <li>Visual axis</li> <li>Permanence &amp; stability</li> <li>Boundaries</li> <li>Colour</li> <li>Lighting</li> <li>Access</li> </ul>	<ul style="list-style-type: none"> <li>Modularity</li> <li>Hierarchy</li> <li>Configuration</li> </ul>	<ul style="list-style-type: none"> <li>Thermal comfort</li> <li>Passive design strategies</li> <li>Ventilation</li> <li>Daylighting</li> </ul>

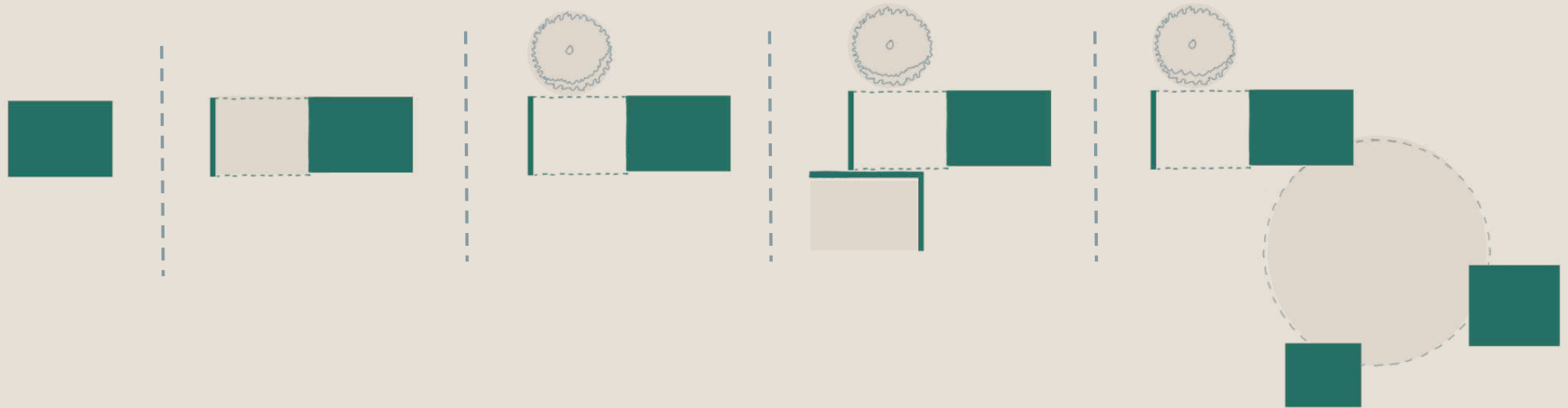


**MELUSI**  
25°43'25"S 28°08'53"E  
INFORMAL SETTLEMENT

# SPATIAL DESIGN DEVELOPMENT

FIGURE 24 **Satellite image of Melusi.**  
Source: © Mapbox, © OpenStreetMap. [edited]

# MASTER PLAN DESIGN CONCEPT



## CLOSED ROOM

SAFE & SECURE  
PERMANENCE  
INSIDE SPACE

## OPEN ROOM

FLEXIBLE  
TEMPORARY  
OUTSIDE SPACE

## TREES

DEFINE SPACE  
GUIDE

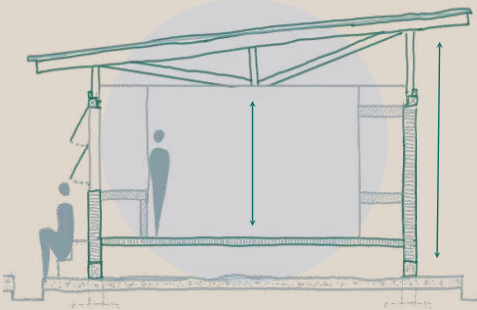
## INCREMENTAL

ADD ON  
EXPAND AS NEEDED

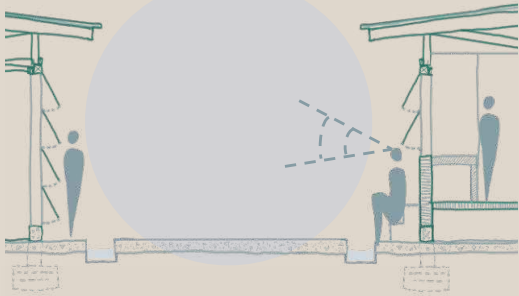
## ORIENTATION

COURTYARD TYPOLOGY  
SPORTS FIELD  
PROTECTION

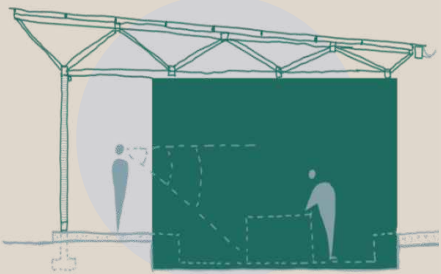
# SPATIAL DESIGN DEVELOPMENT



**SAFETY: INTIMACY & SCALE**



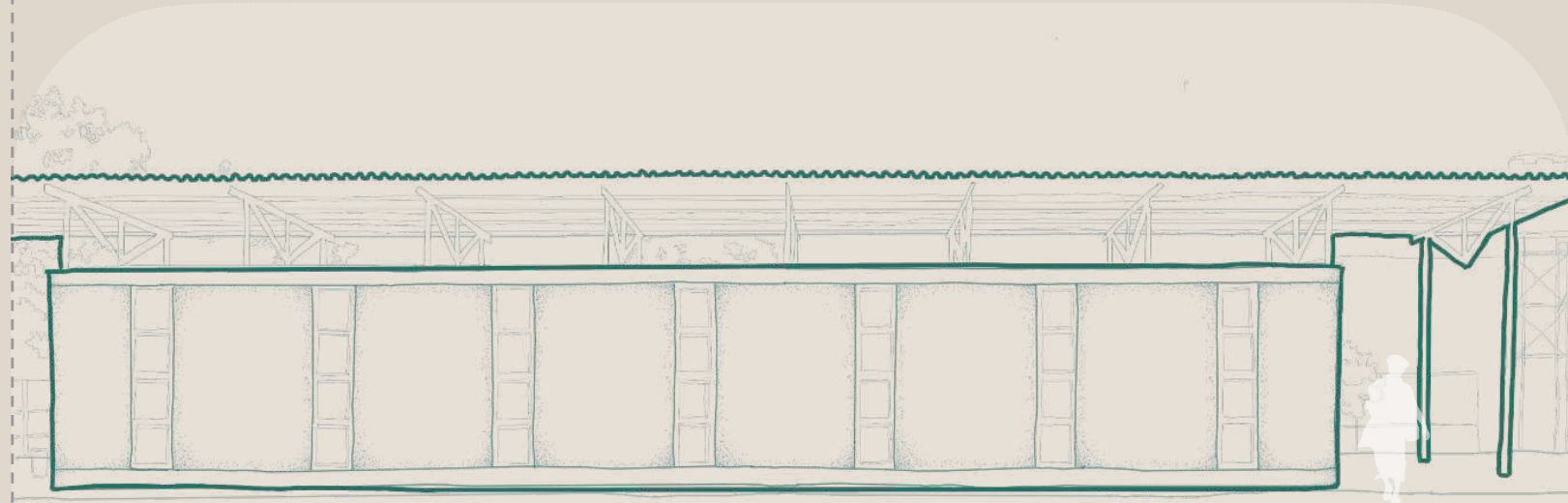
**SAFETY: SURVEILLANCE**



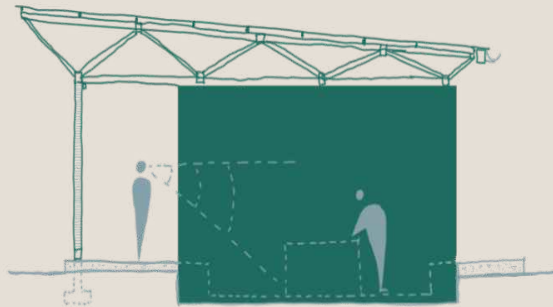
**WELL-BEING: VISUAL INTRIGUE**



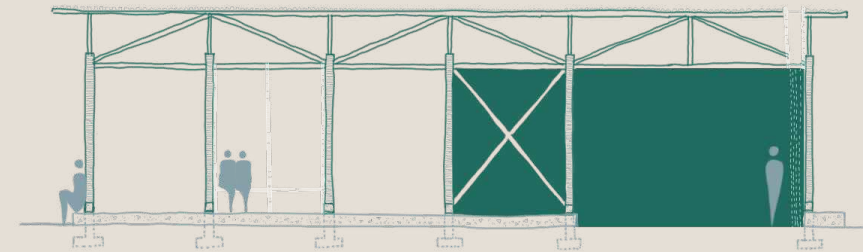
**WELL-BEING: SOCIALISING & EXCHANGE**



**TYPICAL ELEVATION**



**TYPICAL CROSS SECTION**



**TYPICAL LONGITUDINAL SECTION**

## SPATIAL DESIGN AND REGENERATIVE JOURNEY OF THE MYDO HUB

The spatial design of the MYDO Regenerative Design Hub combines site analysis, community input, and sustainable practices, situated at the accessible Vincent Sports Ground to serve as a central gathering point for Melusi's residents.

### The Four-Level Journey of Regeneration

The hub's design is organised into four progressive levels, each representing a stage in personal and community transformation:

#### Level 1: Personal Regeneration – Bridging Facility

The journey begins in the *Bridging Facility*, a nurturing space focused on well-being, creativity, and emotional healing, particularly for individuals recovering from substance use. This facility incorporates art and occupational therapy, guided by COSUP, to foster mindfulness and self-discovery. Designed with modular desks, calming colours, and natural materials like reclaimed wood, the space encourages personal growth in a supportive environment.

#### Level 2: Crafting and Skill-Building – Makerspace

Participants advance to the Makerspace, where they develop practical skills in woodworking, metalworking, textiles, and digital fabrication. This space emphasises hands-on skill-building, fostering economic empowerment and a sense of purpose. By starting with basic handicrafts and progressing to more advanced traditional crafts, participants gain confidence and expertise, reconnecting with local ways of making and learning new ways as well as preparing for future economic opportunities.

#### Level 3: Community Regeneration – Placemaking Initiatives

With new skills and confidence, participants engage in community projects like murals, paving, and public space upgrades. These placemaking efforts enhance physical and emotional safety, creating shaded areas and improved roads while promoting pride and ownership within the community. These collaborative projects strengthen the community's collective commitment to improving Melusi.

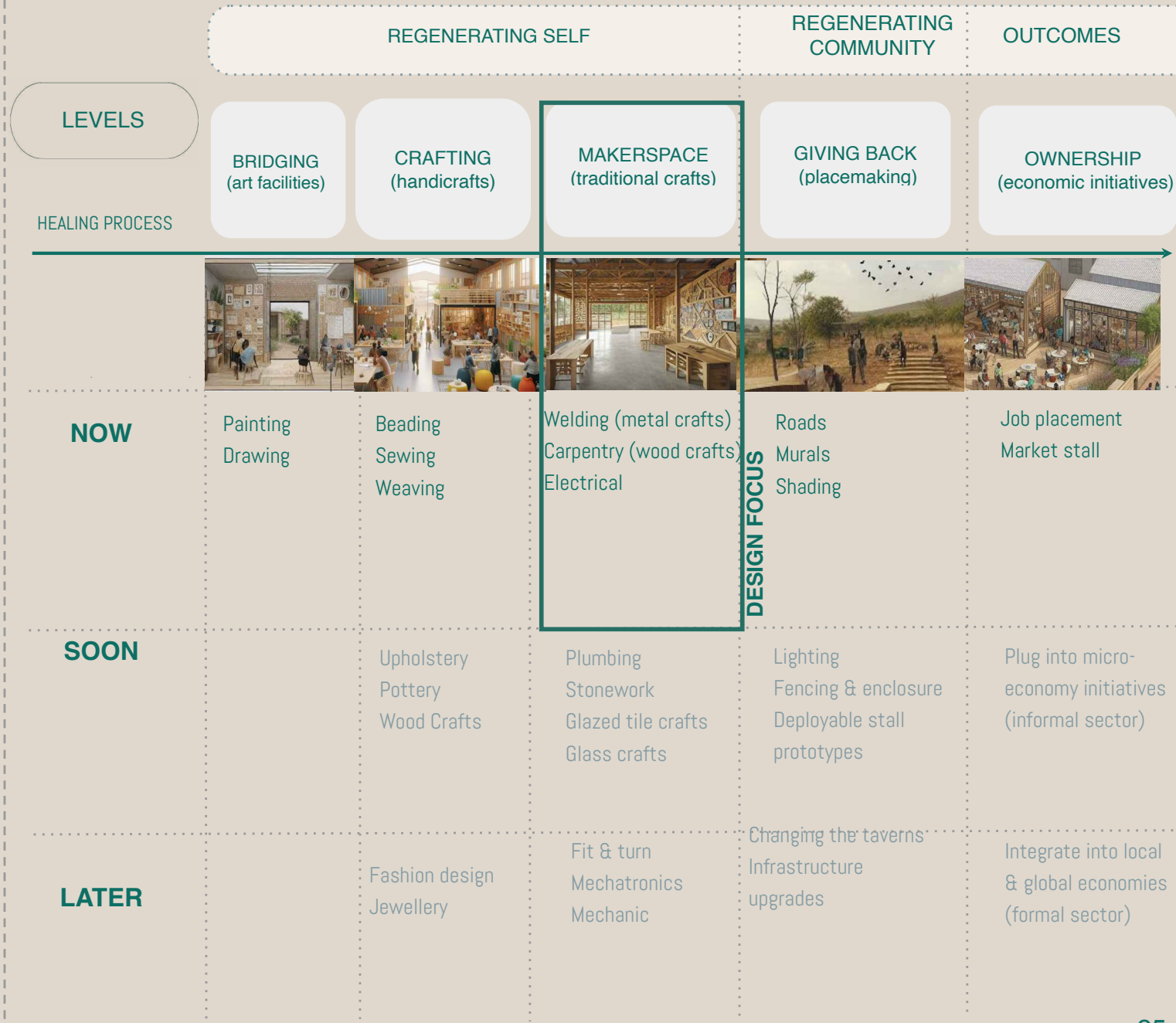
#### Level 4: Economic Independence – Ownership and Cooperative Opportunities

The final stage offers participants opportunities for economic independence through job placements or market stalls where they can sell their crafted products. This level promotes cooperative principles and sustainable materials, rewarding skill mastery and fostering long-term self-sufficiency.

#### Structured Pathway to Regeneration

Through these four levels, the MYDO Regenerative Design Hub provides a structured, holistic journey of personal and community empowerment, encouraging Melusi's residents to build sustainable futures rooted in creativity, skill, and social connection.

# SPATIAL DESIGN DEVELOPMENT



## SPATIAL PLANNING AND DESIGN LAYOUT

### Creative Incubator Corridor

A vibrant space for residents to showcase their crafts, operate market stalls, and engage with the community, promoting economic empowerment and instilling pride in local craftsmanship.

### Sports Stands with Market and Ablutions

Dual-purpose stands for viewing sports events, paired with market spaces and sanitation facilities. This multifunctional area supports both sports activities and economic engagement, enhancing community participation.

### Multipurpose Exhibition and Market Space

A flexible area designed for exhibitions, community markets, and social events, accommodating a wide range of cultural and community gatherings.

### Reception & Offices (Administration)

The administrative centre of the hub, providing a coordinated entry point and operational support for the hub's programs and activities.

### Outdoor Amphitheatre

An open-air performance space for cultural events, community gatherings, and shows, encouraging social interaction and cultural expression within Melusi.

### Bridging Facilities (Design & Art Studio)

Spaces dedicated to art, design, and therapy workshops, fostering personal healing and creative exploration, particularly beneficial for participants in recovery.

### Upgraded Sports Field & Court

Enhanced sports areas offering safe, accessible spaces for physical activity, youth engagement, and team-building.

### Craft Units (Handicrafts)

Designated spaces for handicrafts, where residents can learn and practice traditional and creative skills, supporting cultural preservation and economic potential.

### The Makerspace (Traditional Crafts)

A central workshop area for traditional crafts such as carpentry, metalworking, and sewing, aimed at developing skills for economic empowerment and community development.

### Ablutions

Essential sanitation facilities to ensure a comfortable and accessible environment for all hub users, supporting health and inclusivity across the hub's spaces.

This layout of interconnected spaces is designed to support community interaction, personal growth, and economic engagement, creating a holistic environment for empowerment and regeneration within Melusi.

# SPATIAL DESIGN DEVELOPMENT



EXISTING SITE



DESIGN ITERATION 1



DESIGN ITERATION 3



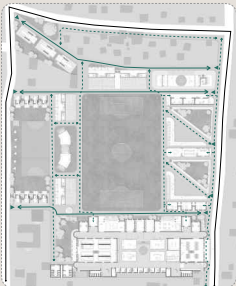
DESIGN FOCUS

**PARTI-DIAGRAMS**



**SPATIAL DISTRIBUTION**

- ABLUTION
- ADMIN & OFFICES
- EXHIBITION
- GRANDSTAND (seating)
- MARKET (commercial)
- MAKING & CREATING
- SEATING
- STORAGE
- FOOD & PREP



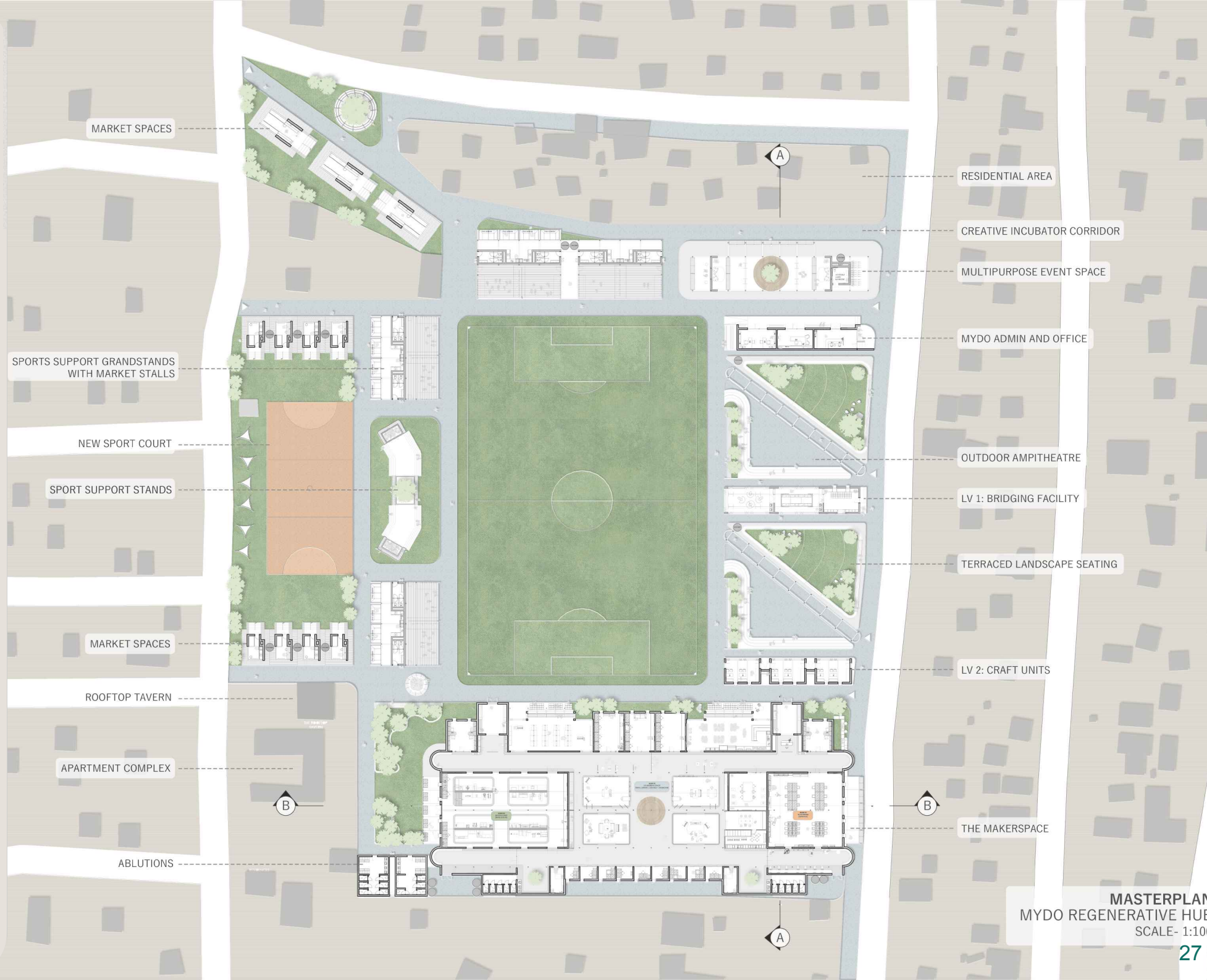
**ACCESS & CIRCULATION**

- ▶ SITE ENTRANCE
- ← PRIMARY ACCESS / CIRCULATION
- ⋯ SECONDARY ACCESS / CIRCULATION
- ⋯ BUILDING ENTRANCE

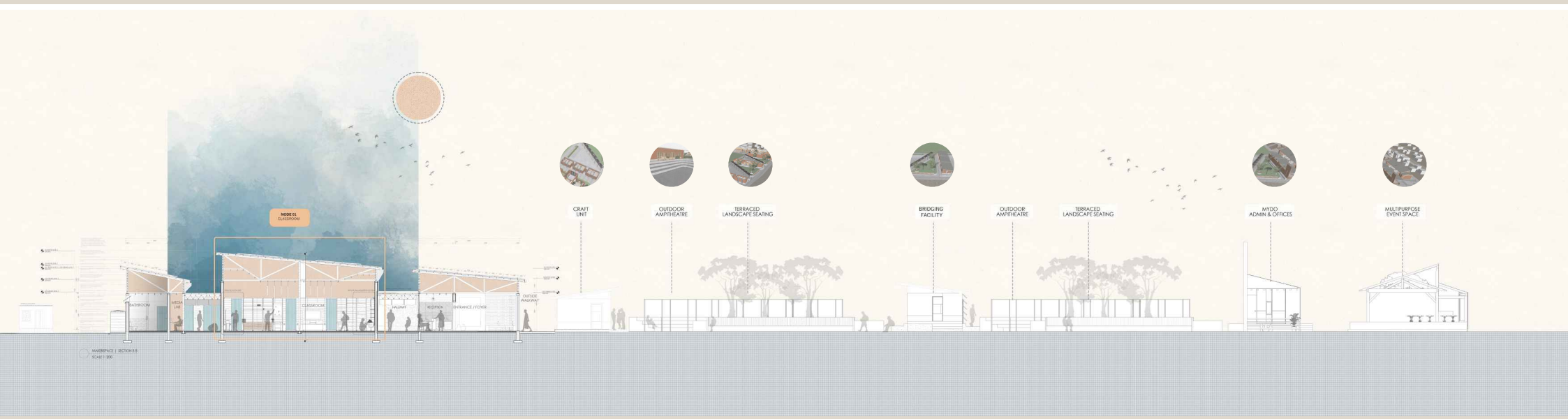


**INCREMENTAL DEVELOPMENT**

- NOW
- SOON
- LATER



**MASTERPLAN**  
**MYDO REGENERATIVE HUB**  
 SCALE- 1:100





# TECHNICAL ENQUIRY

## TECHNOLOGY INVESTIGATION AND DESIGN NODE

The *Nudge for Good* project leverages sustainable, low-tech, high-impact interventions to align with Melusi's resources and environmental context. Prioritising local materials, passive climate control, and adaptable construction, the MYDO Regenerative Hub aims to foster community engagement, environmental sustainability, and resilience. Each design node integrates these principles to support personal and communal regeneration through accessible, sustainable technology.

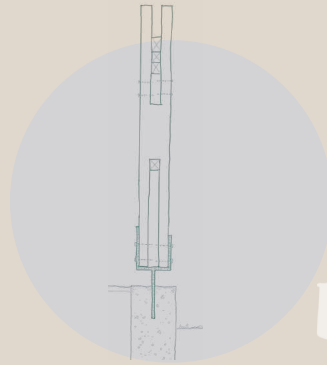
### TECHNICAL QUESTION:

How can passive design strategies and local materials be used to create a sustainable and adaptable design for the MYDO Regenerative Hub? The goal is to ensure the design stays relevant to the community's evolving needs, reduces environmental impact, and embeds local knowledge systems in the construction process.

## INTEGRATION OF ADAPTABLE, USER-RESPONSIVE TECHNOLOGIES AND SUSTAINABLE MATERIALS

The MYDO Regenerative Hub incorporates adaptable, user-responsive technologies and sustainable materials that align with its core principles of Nudge, Craft, Safety, Well-being, and Incremental Growth. This approach supports creativity and community engagement while promoting environmental sustainability.

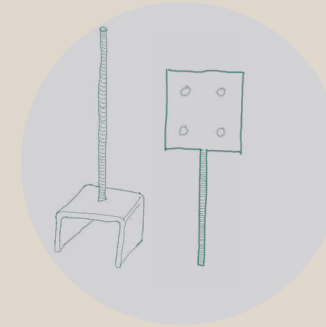
## APPROACH: LOW-TECH HIGH DESIGN | SUSTAINABLE PRACTICES



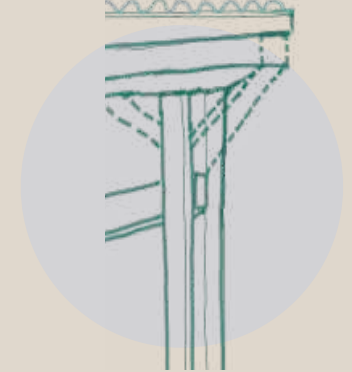
STANDARD SIZES



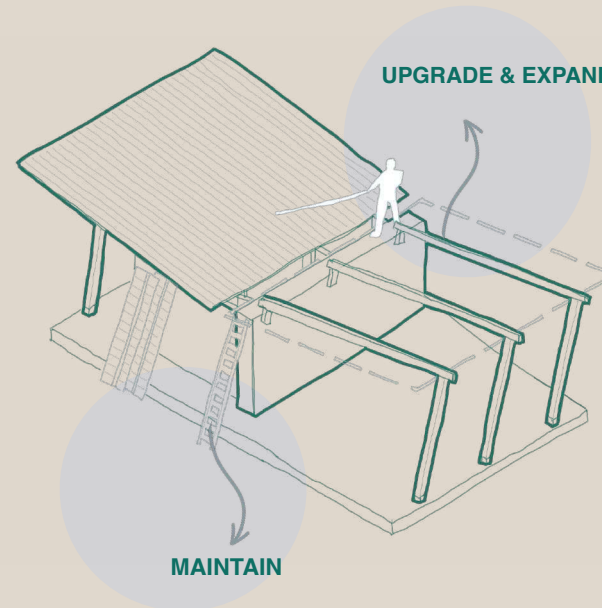
AFFORDABILITY & PROXIMITY (15km Radius)



LOCAL CRAFTSMEN



SUBTLE CUES



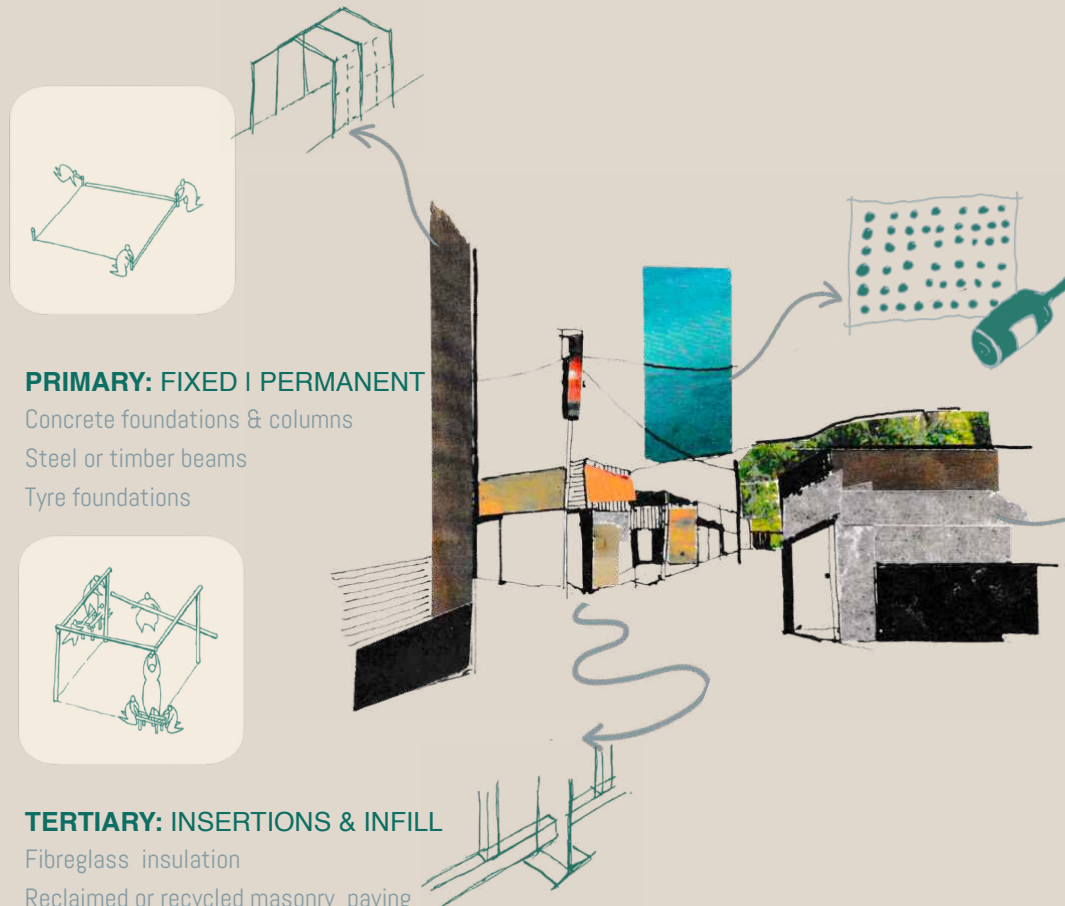
# TECHNOLOGY INVESTIGATION

## LOW TECHNOLOGY - HIGH DESIGN APPROACH

The MYDO Hub's design relies on a *Low Technology - High Design* approach, focusing on simplicity, sustainability, and user engagement. By combining accessible technologies with thoughtful design, the hub minimises complexity and costs, ensuring maintenance ease and responsiveness to user needs.

**Local Materials and Resource Efficiency:** Materials such as adobe bricks, reclaimed wood, and SA Pine are used for their environmental and local significance. Adobe's thermal mass provides natural insulation, while polycarbonate panels and glass bottles maximise natural lighting, reducing energy costs. This reduces environmental impact and celebrates local craftsmanship.

**Modular and Adaptable Construction:** Modular components, such as track systems and dry joinery, allow spaces to be reconfigured, expanded, or maintained with ease, supporting the principle of *incremental* growth and enabling the community to actively participate in construction.



### PRIMARY: FIXED | PERMANENT

- Concrete foundations & columns
- Steel or timber beams
- Tyre foundations

### TERTIARY: INSERTIONS & INFILL

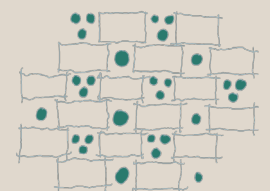
- Fibreglass insulation
- Reclaimed or recycled masonry paving
- Adobe walls - clay & sand
- Breeze blocks or perforated bricks
- Screens - sugar cane, wattle & weaving
- Sand casting - using precast elements for small scale elements - benches & basins
- Metal sheeting and polycarbonate roofing & skylights

### WINDOWS:

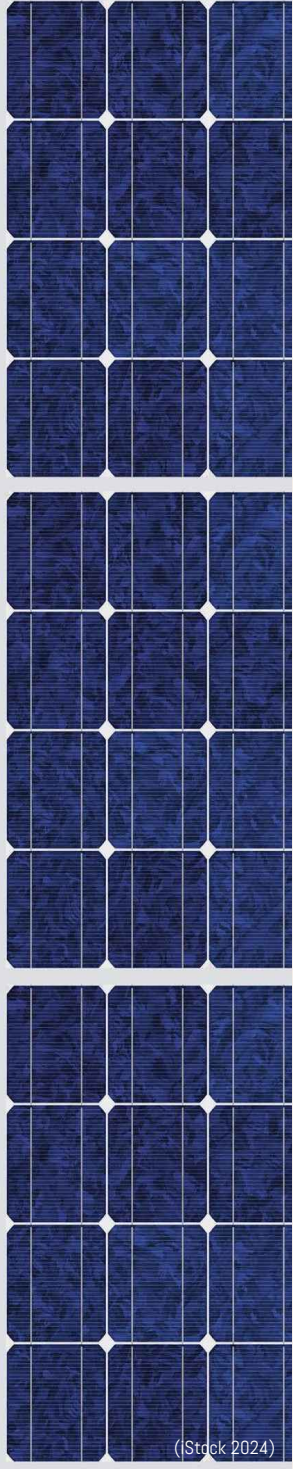
Recycled plastic or glass - crushed & moulded  
Sourced from coca-cola or collected from the network of Taverns

### SECONDARY:

- Beams
- Gutters
- Purlins



## Solar- Lighting & Power



(iStock 2024)

## Timber - Structural Framing



(iStock 2024)

## Adobe - Bricks



(iStock 2024)

## Glass Bottles - Accent walls



(iStock 2024)

## Reeds - Ceilings & Pergolas



(iStock 2023)

# TECHNOLOGY INVESTIGATION

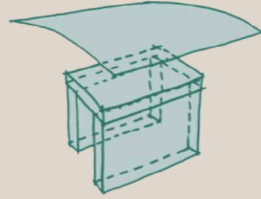
## SUSTAINABILITY AND INTEGRATED TECHNOLOGY

Sustainability is central to the hub's design, with a focus on affordability and ecological responsibility through reclaimed materials and passive design strategies. Key features include renewable energy systems, such as solar panels, which deals with the issue of no external power sources. Rainwater harvesting systems store water for irrigation and sanitation, promoting self-sufficiency and water conservation.

**Passive Design Strategies:** Natural ventilation, daylighting, and shading devices create comfortable indoor environments with minimal energy consumption. Long windows and open layouts maximise natural light, while shading reduces heat gain.

**Double Roof System:** A double roof design with reed ceilings and IBR sheeting provides effective passive cooling, allowing heat to escape and ensuring comfort without the need for air conditioning. This structure is both cost-effective and energy-efficient, using simple materials that the community can maintain.

**Ventilation and Airflow:** The building layout encourages cross-ventilation through strategically placed windows, glass bricks, and open floor plans, contributing to a comfortable indoor environment and further reducing energy usage.

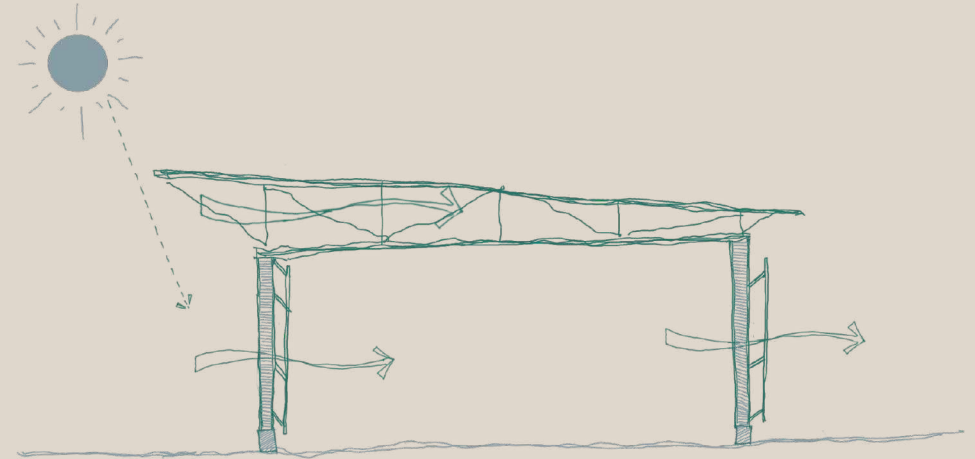


### WELL-BEING

Thermal comfort  
Passive design strategies  
Ventilation  
Daylighting

### COMFORT

DOUBLE ROOF SYSTEM  
INSIDE & OUTDOOR  
CLASSROOMS  
HUMAN SCALE -  
SHADING DEVICES



SUMMER



WINTER

# TECHNOLOGY INVESTIGATION

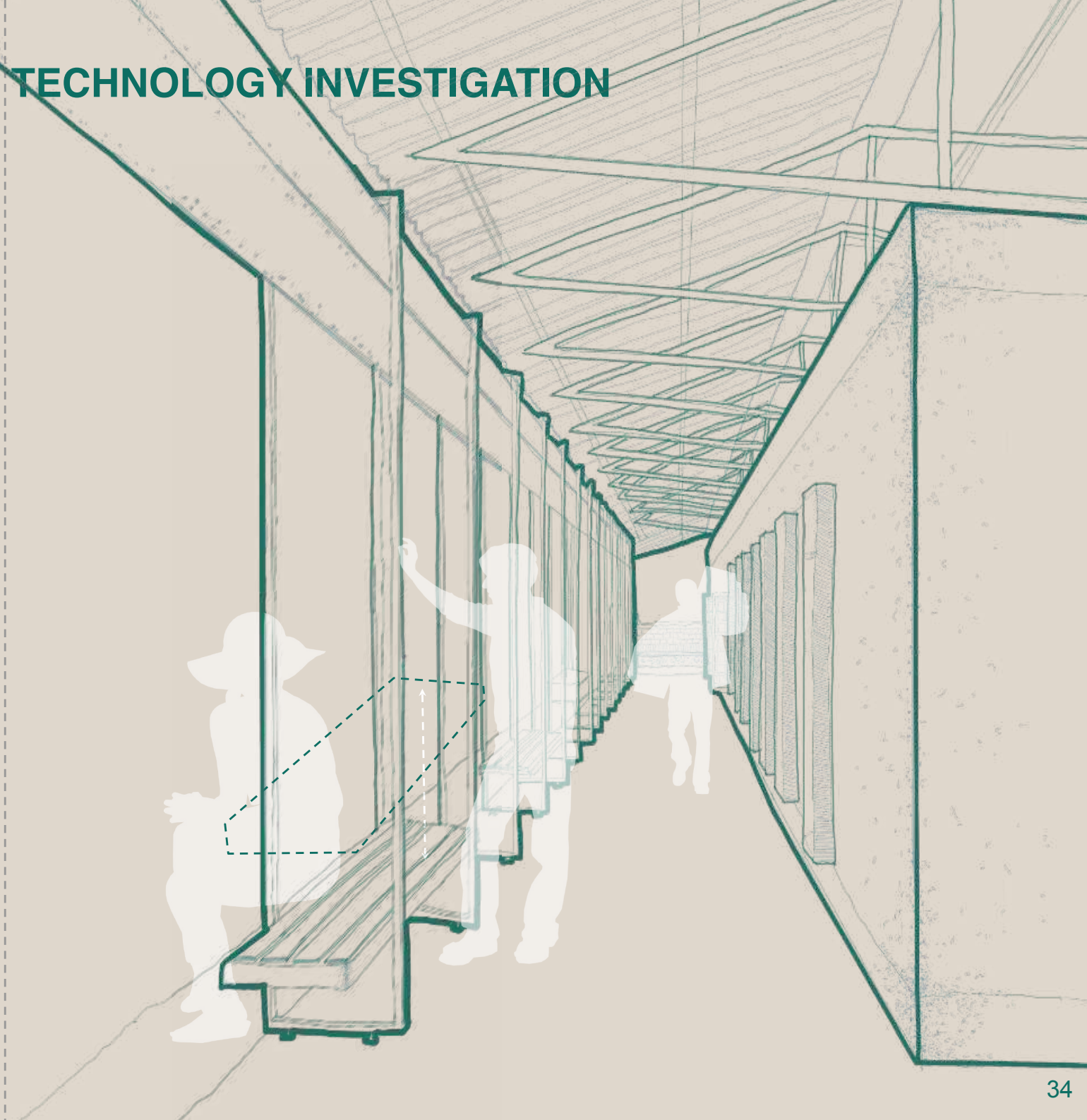
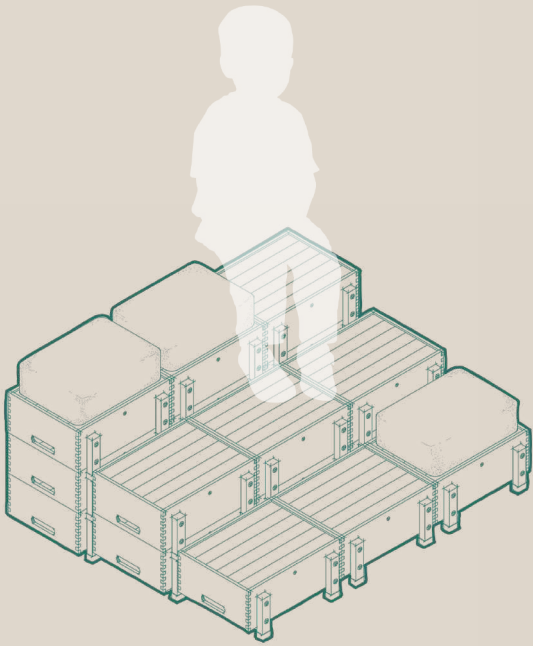
## HIGH DESIGN PRINCIPLES

**User-Centric Design:** The hub is designed with intuitive, accessible spaces, including ergonomic workstations and adjustable furniture that cater to diverse needs, especially for individuals recovering from substance use.

**Adaptable Spaces:** Modular furniture and flexible layouts allow spaces to be easily reconfigured, supporting *incremental* growth and responding to evolving community needs.

**Aesthetic and Functional Integration:** Practical elements, such as shading devices, double as art installations, creating inviting spaces that reinforce *craft* and *well-being*.

**Wayfinding and Spatial Flow:** Thoughtful planning with clear sightlines, colour-coded zones, and visual cues subtly guide users toward areas of engagement, participation, and productivity.



# TECHNOLOGY INVESTIGATION

## MATERIAL INNOVATION AND LIGHT DIFFUSION

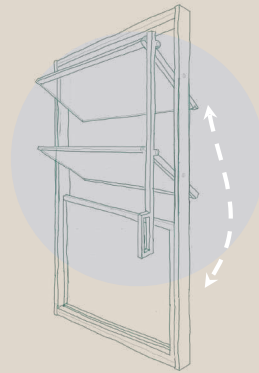
The project integrates innovative uses of materials to enhance natural lighting and create dynamic, energy-efficient spaces:

**Adobe with Glass Bottle Extrusions:** Adobe walls with embedded glass bottle extrusions help to filter light into the space, creating a natural, atmospheric glow while preserving energy.

**Polycarbonate Sunlight Panels:** These lightweight and cost-effective panels are integrated into the roof to maximise daylight while minimising heat gain, enhancing the energy efficiency of the building.

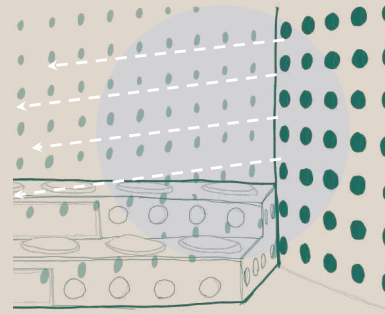
**Glass Bricks:** Strategically placed glass bricks further diffuse natural light, reducing the need for artificial lighting during the day and creating a bright, uplifting environment for users.

## WELLBEING & NUDGES: LIGHT TO GUIDE ONE'S EXPERIENCE THROUGH THE MAKERSPACES



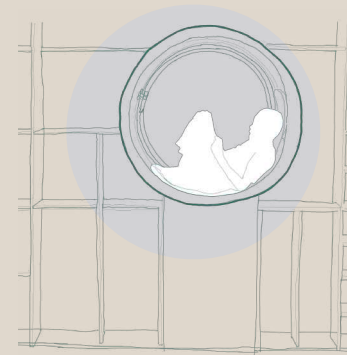
**CONTROLLING LIGHT & TEMPERATURE**

PIVOT WINDOWS & SHADING DEVICES



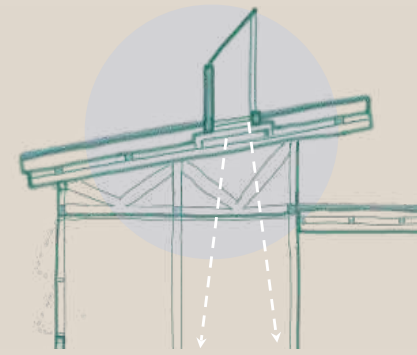
**FILTERING LIGHT WITH BOTTLE WALLS**

MATERIALITY



**ENJOYING THE LIGHT**

WINDOW TREATMENTS & NOOKS



**LIGHT TO GUIDE**

POLYCARB SKYLIGHT DETAIL

# TECHNOLOGY INVESTIGATION

## MODULARITY, STANDARD SIZING, AND ADAPTABILITY

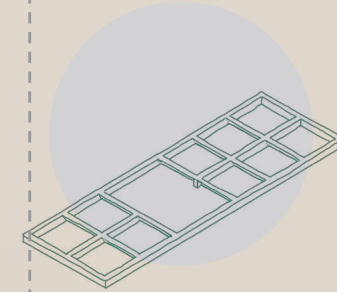
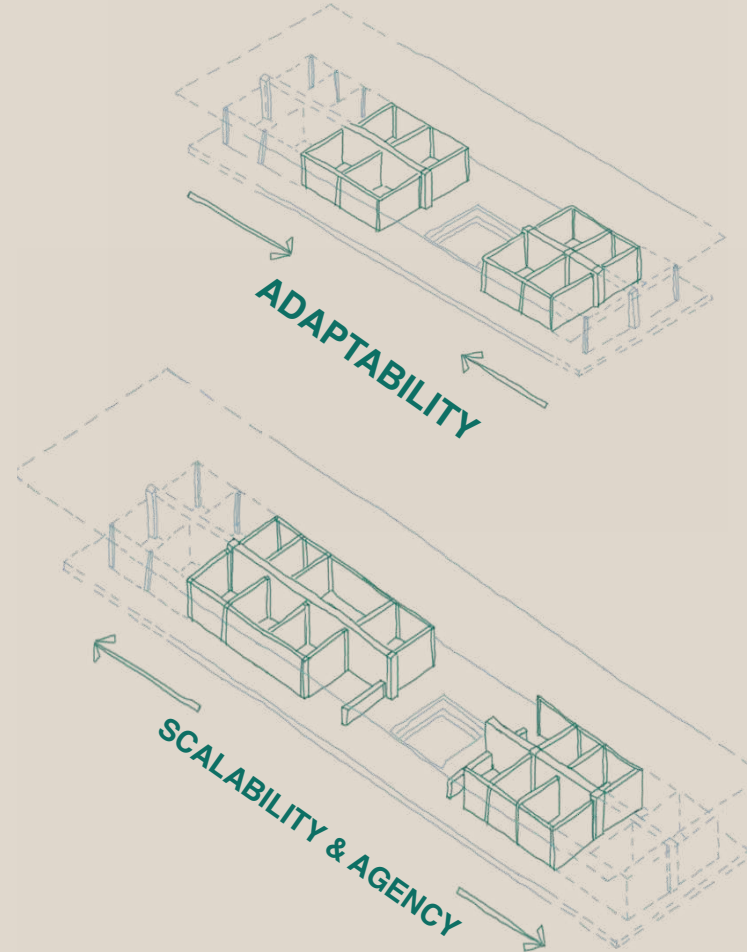
**Standardised components:** IBR sheeting, increments of 38mm timber, composite columns and squared off gum-pole makes construction cost-effective and adaptable, allowing ease of maintenance and future modifications. Adobe's thermal properties regulate indoor temperatures, and its use promotes local craftsmanship, connecting the hub to local building practices and cultural pride.

**IBR Sheeting:** Used for roofing, this material provides durability and weather resistance, supporting passive cooling in the double roof system.

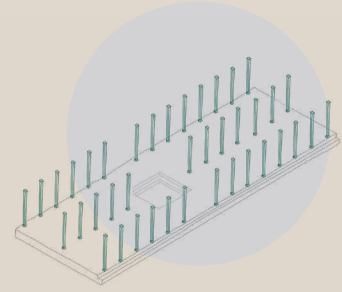
**Timber Frame with Adobe Infill:** Combining timber framing with adobe infill offers flexibility and strength, enabling incremental construction.

The adaptive, *incremental* design allows the MYDO Regenerative Hub to grow organically, aligning with Melusi's evolving needs. By prioritising sustainable materials and passive design strategies, the project nurtures community ownership while ensuring environmental responsibility. This phased development approach creates a resilient, flexible environment that serves the community's long-term growth and *well-being*.

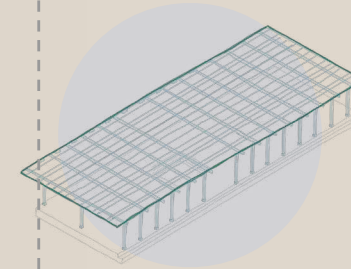
### INCREMENTAL



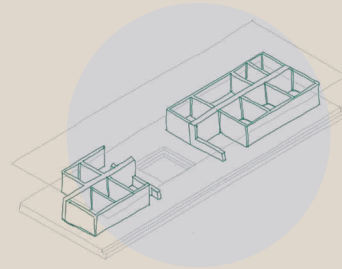
RAMMED EARTH FOUNDATION



INCREMENTS OF 38mm TIMBER, COMPOSITE COLUMNS & SQUARE GUM POLE



STANDARD IBR SHEETING



ADOBE WALLS INFILL

# TECHNOLOGY DESIGN FOCUS

## THE MAKERSPACE | CENTRAL HUB OF CREATIVE INCUBATION AND INNOVATION

### Purpose

The Makerspace serves as the heart of the MYDO Regenerative Hub, designed to foster creative incubation, hands-on skill-building, and innovation. It offers a variety of zones to support textile work, 3D printing, woodworking, and other crafts, providing a versatile environment that encourages exploration and growth.

### LAYOUT DETAILS

**Entrances and Reception:** Equipped with benches for waiting and a reception area to welcome users, leading into the main creative zones.

**Classroom:** A modular space for skill development, talks, and community classes, adaptable to suit both MYDO programming and wider community needs.

**Computer/Media Lab:** A quiet zone for digital literacy and individual work, supporting digital skill-building and empowerment. Separated from more intensive and loud areas to ensure a safe, organised, and supportive environment.

**Dust-Free Zones:** Areas for textile work, 2D & 3D printing, and laser cutting support precision work, with adjacent material sourcing space.

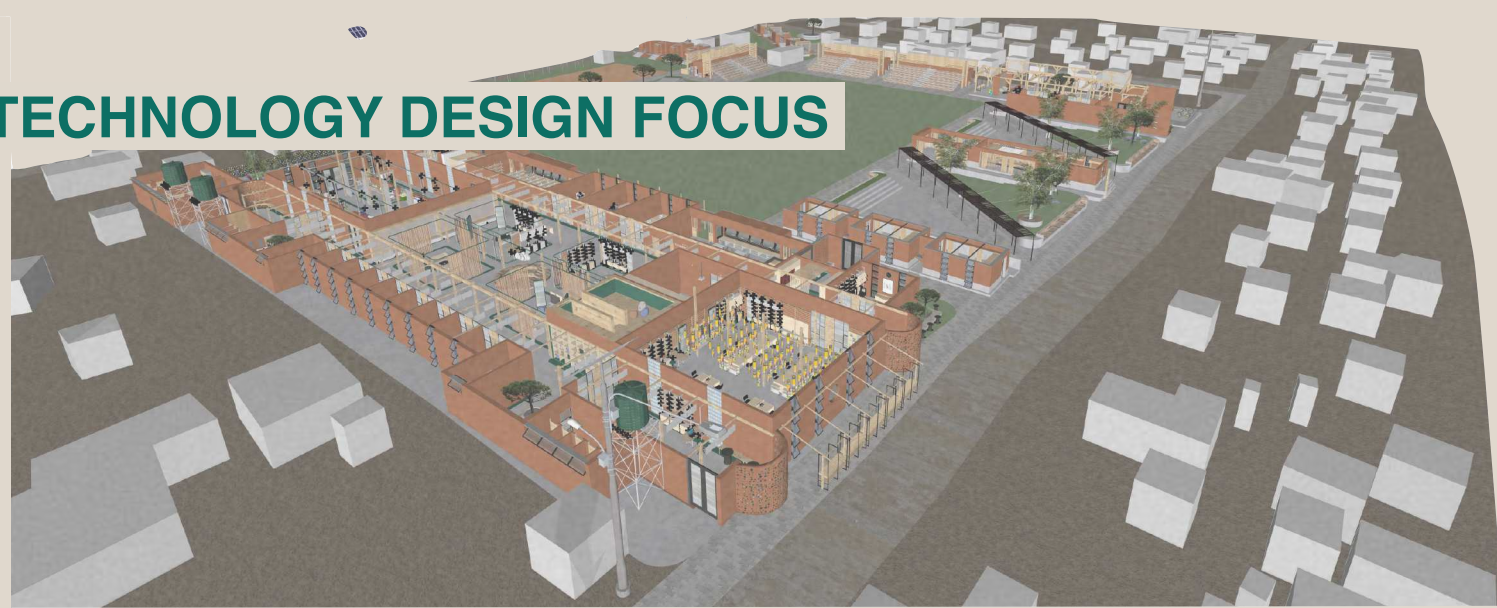
**Hallways with Polycarbonate Panels:** These double as transit and exhibition spaces, encouraging informal engagement and visual interaction.

**Collaborative Co-Working Space:** Central to the Makerspace, this adaptable area includes a conversation pit, moveable panels, and cubicles, supporting collaboration and personal reflection.

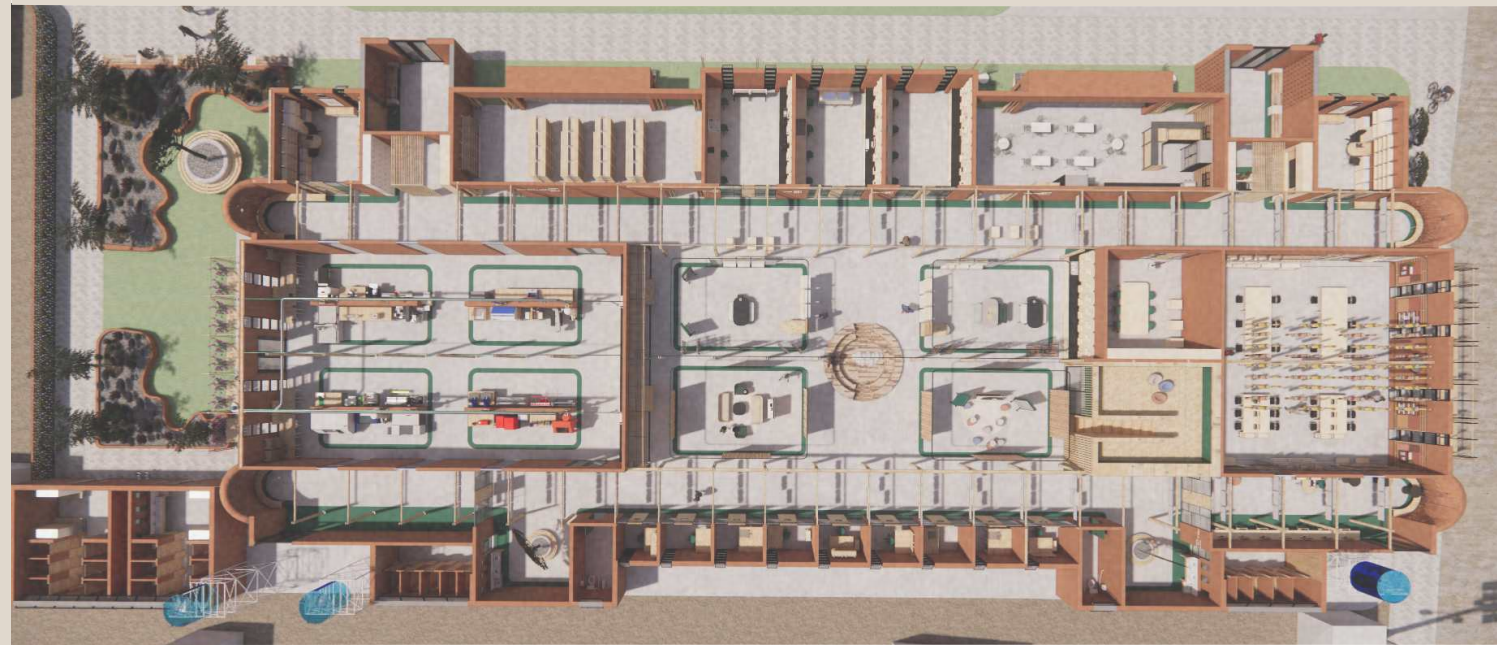
**Machine Shop:** A dedicated space for woodworking and metalwork, equipped for noisier and messier tasks, with both indoor and outdoor areas.

**Service Areas:** Storage, ablutions, and service yards located at the back maintain functionality without disrupting creative activities.

MYDO REGENERATIVE HUB



MAKERSPACE



MAKERSPACE ENTRANCE



