

# CO(E)<sup>3</sup>

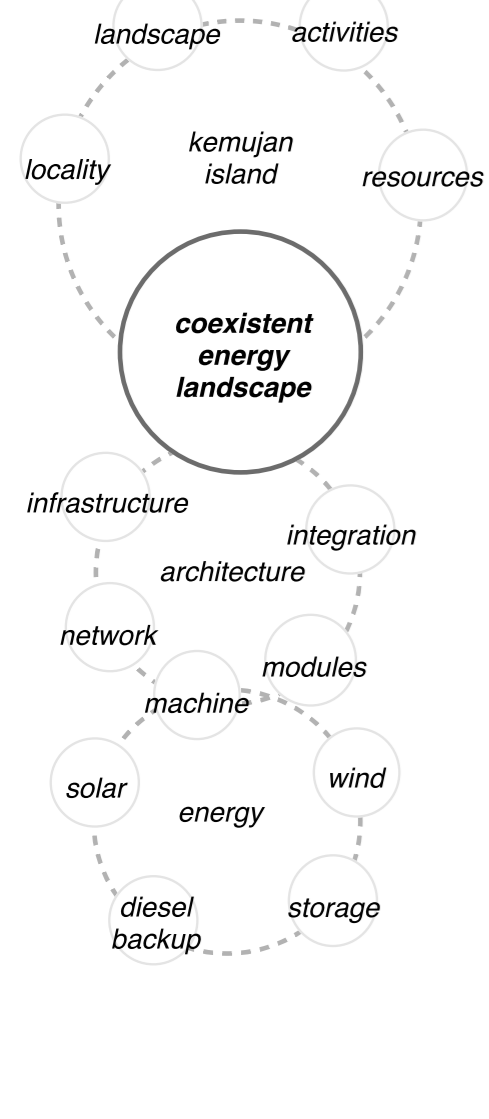
a design framework where Energy, Existence, and Environment operate as interdependent systems within a distributed architectural locality in Kemujan, Karimunjawa.



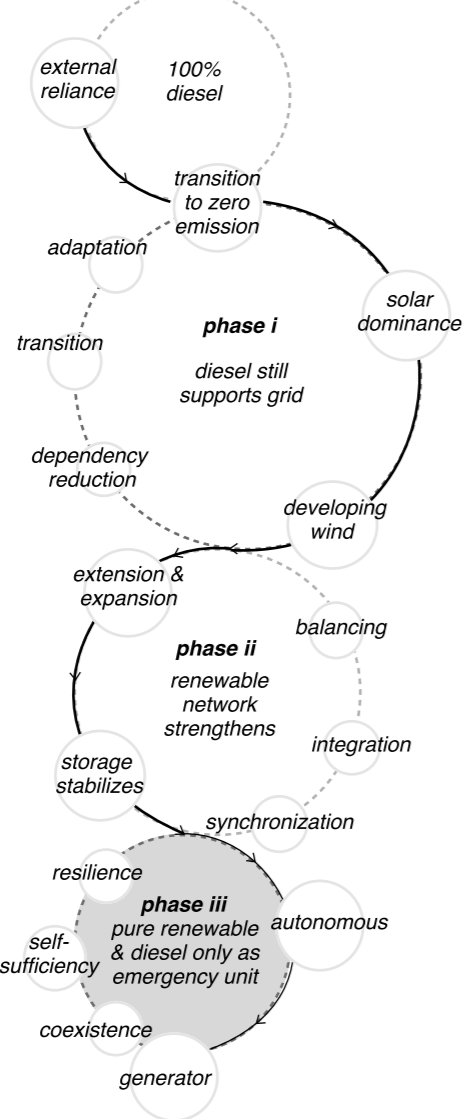
## about

The project redefines the conventional powerplant from a centralized and isolated industrial facility into a distributed coexistent energy network integrated with the island's ecology and daily life. Responding to different environmental potentials across the island, solar, wind, and diesel backup systems are placed in context-driven locations where energy infrastructure also supports public, productive, and ecological activities. These decentralized modules are interconnected through a central hub that acts as a metabolic machine for monitoring, storage, and system integration, while the diesel generator gradually shifts into emergency-only infrastructure. Through this approach, the hybrid powerplant becomes not only a system for generating electricity, but an adaptive architectural landscape where energy, environment, and society coexist.

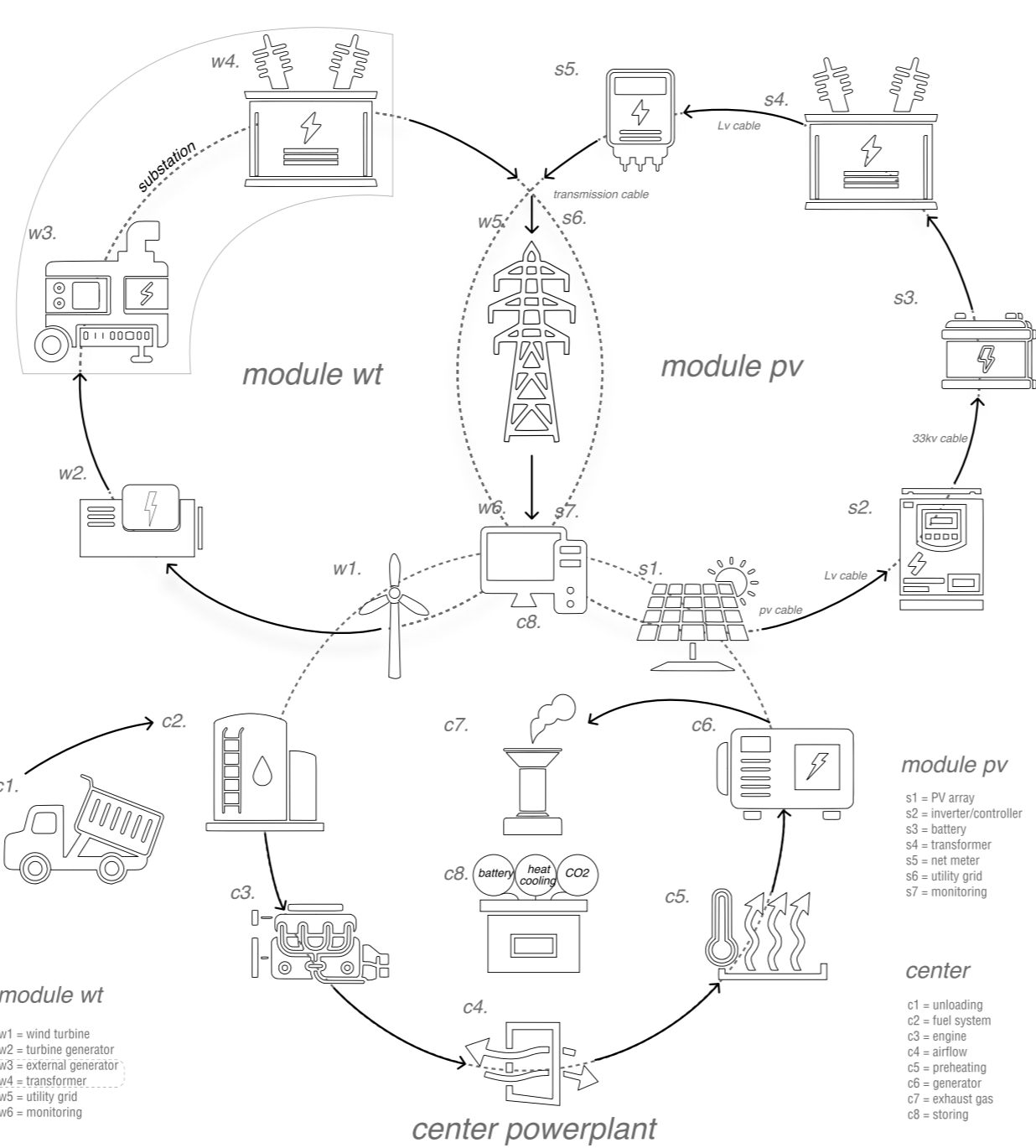
### the big concept



### main scenario



## system



module wt  
 w1 = wind turbine  
 w2 = turbine generator  
 w3 = external generator  
 w4 = transformer  
 w5 = utility grid  
 w6 = monitoring

module pv  
 s1 = PV array  
 s2 = inverter/controller  
 s3 = battery  
 s4 = transformer  
 s5 = net meter  
 s6 = utility grid  
 s7 = monitoring

center  
 c1 = unloading  
 c2 = fuel system  
 c3 = engine  
 c4 = air flow  
 c5 = preheating  
 c6 = generator  
 c7 = exhaust gas  
 c8 = storing

<b>weak spots</b>	<b>condition</b>
erosion	public
habitual loss	coastal
less natural cooling	climate
run by the day	degradation
	overexposure
<b>Beach Context</b>	
core	emergency
diesel backup	support
monitoring	integrated
maintenance	machine-based
	technical
<b>Center</b>	
<b>Airport Context</b>	
not crowded	
parking	overexposure
runway	
<b>Hills Context</b>	
erosion	settlement
elevated	coastal
wind exposure	
<b>Hills Context</b>	
elevated	hike
nature	viewing
forestry	observing
	stop
	windy

## Kemujan, Karimunjawa

