

INFRASTRUCTURAL IMAGINARIES IN SCANDINAVIA

GSAPP 2018 SUMMER WORKSHOP
TEI CARPENTER & JESSE LECAVALIER
JULY 25 - AUGUST 10



TEI CARPENTER

Tei Carpenter is an architectural designer, educator and founder of Brooklyn based design studio Agency-Agency. The studio's recently completed work includes a new non-profit headquarters in downtown Houston and a winning entry for *LA+ Journal's* island competition. In 2018, Agency-Agency was a winner of the New Practices New York award from the American Institute of Architects. She is Adjunct Assistant Professor at Columbia University's Graduate School of Architecture, Planning and Preservation and Director of the Waste Initiative, an applied research and design platform.

Carpenter's design and research work into architecture's entanglement with emerging natures has been supported by the New York State Council on the Arts and has been exhibited at the Storefront for Art and Architecture and at the 2016 Venice Biennale. Recent design work and writing have appeared in *Artforum*, *Cite*, *Pidgin*, and *Plat*. Previously she has taught at Brown University, Cornell University, City College of New York and at Rice University as the Wortham Visiting Lecturer. Carpenter earned a Bachelor of Arts degree in Philosophy from Brown University and her Master of Architecture degree from Princeton University where she was awarded the Howard Crosby Butler Traveling Fellowship in Architecture.

JESSE LECAVALIER

Jesse LeCavalier (LECAVALIER R+D) is a designer, writer, and educator whose work explores the architectural and urban implications of contemporary logistics. He is the author of *The Rule of Logistics: Walmart and the Architecture of Fulfillment* (University of Minnesota Press, 2016). He is Assistant Professor of Architecture at the New Jersey Institute of Technology and the Daniel Rose Visiting Assistant Professor at Yale School of Architecture.

LeCavalier is a 2018 MoMA PS1 Young Architects Program finalist for his project SHELF LIFE and his installation "Architectures of Fulfillment" was recently part of the 2017 Seoul Biennale for Architecture and Urbanism. Recognition for teaching includes the 2015 New Faculty Teaching Award from the Association of the Collegiate Schools of Architecture (ACSA) and the 2010-11 Sanders Fellow at the University of Michigan. His work has appeared in *Cabinet*, *Public Culture*, *Places*, *Art Papers*, and *Harvard Design Magazine* and his essay, "The Restlessness of Objects," was the recipient of a 2013 Core77 Design Award.

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Carbon footprints
Guardian Environment
Network

Copenhagen's ambitious push to be carbon-neutral by 2025

The Danish capital is moving rapidly toward a zero-carbon future, as it erects windfarms, transforms its citywide heating systems, promotes energy efficiency, and lures more people out of their cars and onto public transportation and bikes

Justin Gerdes for Yale
Environment 360, part of the
Guardian Environment
Network

Fri 12 Apr 2013 10.30 EDT



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WATER & SANITATION

Here's How Sweden is Recycling 99% of its Waste



By **Garima Bakshi**

AUG. 25, 2016



Wikipedia Commons / Holger Ellegaard

Starting Sunday, August 28, the global water community – decision makers from government, civil society and business – will meet in Stockholm for the world's leading annual event on water and development - World Water Week. Follow [#WWWWeek](#) for updates.

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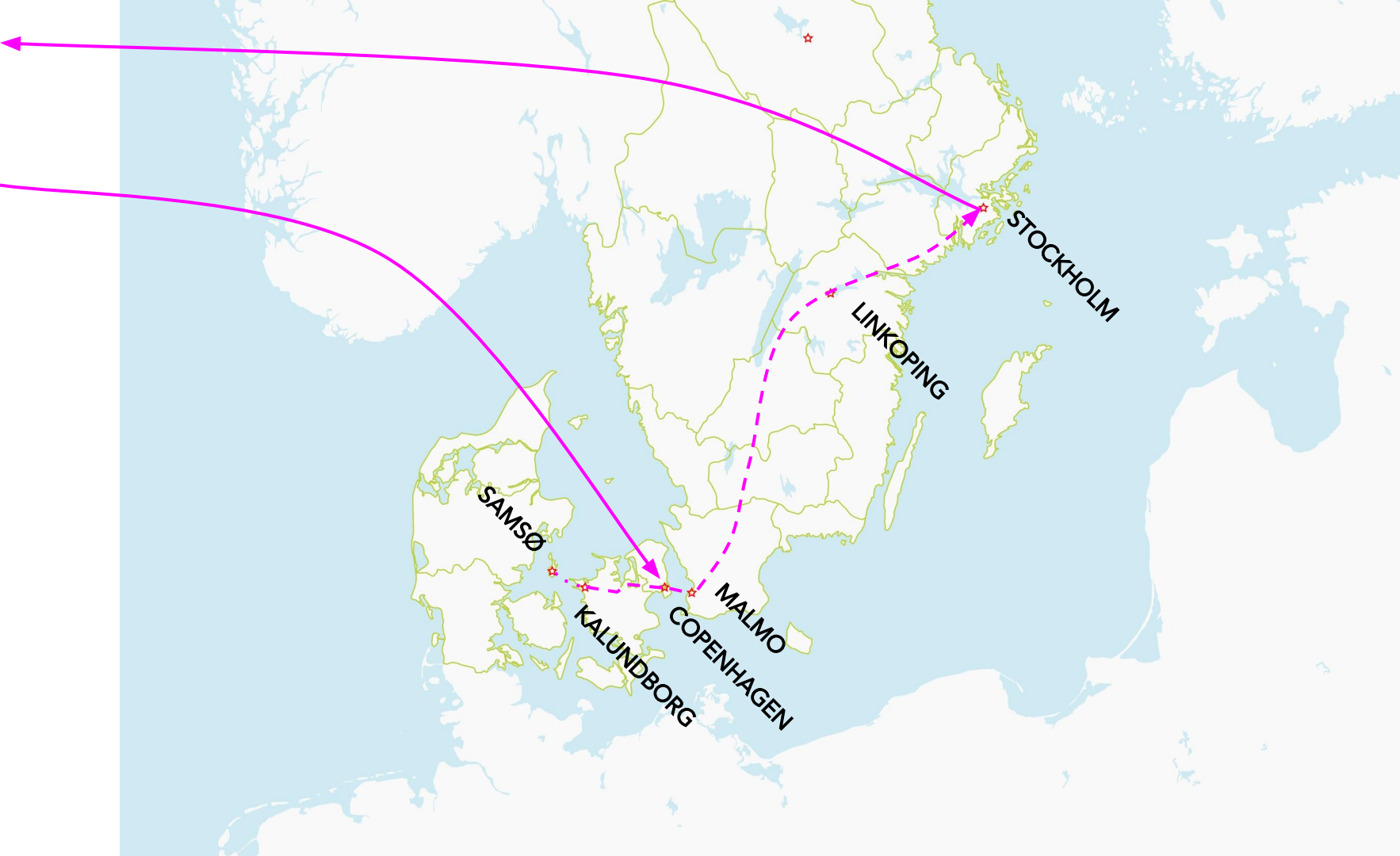
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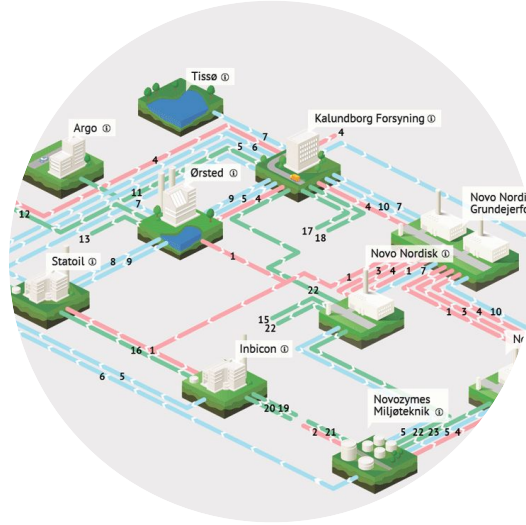
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A circular image showing a field of purple lavender flowers in the foreground, a small house and a wind turbine in the background under a clear blue sky.

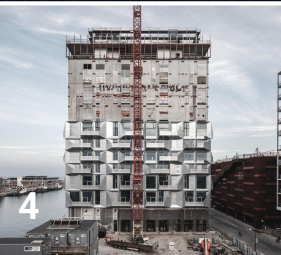
SAMSØ
ENERGY ISLAND



KALUNDBORG
INDUSTRIAL SYMBIOSIS



COPENHILL
CROSS-PROGRAM



PART I

COPENHAGEN ++

COPENHAGEN

1-COPENHILL WTE, BIG

2-ROSKILDE ENERGY TOWER, ERICK VAN EGERAAT

3-UN CITY HEADQUARTERS, 3XNIELSEN NIELSEN

4-THE SILO, COBE

5-MIDDELGRUNDEN WIND FARM

6-NORDHAVN DEVELOPMENT AREA



PART I

COPENHAGEN ++

- 1-SUPERKILEN PARK, BIG + TOPOTEK
- 2-LOUISIANA MUSEUM, BO & WOHLERT
- 3-BAGSVAERD CHURCH, JØRN UTZON
- 4-MOUNTAIN HOUSING, BIG
- 5-TIETGEN HOUSING, LUNDGAARD & TRANBERG
- 6-THORVALDSSENS MUSEUM, M.G.BINDESBØLL
- 7-FROSILO, MVRDV
- 8-HARBOUR BATH, BIG + JDS
- 9-FREETOWN CHRISTIANIA
- ...AND MORE!



PART I COPENHAGEN ++

KALUNDBORG
INDUSTRIAL “ECO-PARK”





PART I

COPENHAGEN ++

SAMSØ

CARBON NEUTRAL COMMUNITY

SAMSØ: THE ENERGY SELF-SUFFICIENT ISLAND

The first island to become completely energy self-sufficient in 10 years?

11 ONSHORE WIND TURBINES

1 turbine generates enough electricity to power **630 houses**.

The turbines transmit electricity to the mainland when more electricity than the island can consume is generated.



OFFSHORE WIND TURBINES

10 103m high offshore wind turbines constructed in 2003 produce more energy than the island uses for transport



11 1MW onshore wind turbines generate 28,000 MWh, that's more electricity than the island's total consumption and the equivalent of 690,000 gallons of oil.

3 x STRAW FIRED PLANTS

- Tranebjerg
Heats **263** households
- Baller / Brøndby
Heats **232** households
- Ørsbjerg
Heats **76** households

SAMSØ: ISLAND FACTS

Area: 114 km²
Population: 4,000
Investment: DKK 368 million

SOLAR PLANT

One of the heating plants receives heat from **2500 m²** of solar panels. This is combined with a **900 KW** wood chip fired boiler.



EXCESS ENERGY

Excess electricity produced from offshore wind farms is invested in new energy projects.





PART II

MALMO / STOCKHOLM

MALMO

LINKÖPING

STOCKHOLM



PART II

MALMO

1-SYSAV

MOST ENERGY EFFICIENT WTE IN SWEDEN; ONE OF THE MOST ADVANCED WTE FACILITIES IN THE WORLD



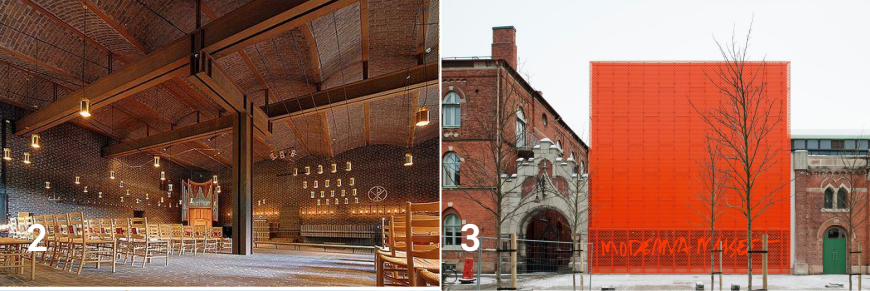
2-WESTERN HARBOR DISTRICT

NEW “ECO” NEIGHBORHOOD ANCHORED BY CALATRAVA’S TURNING TORSO

PART II

MALMO

- 1-FLOWER SHOP, SIGURD LEWERENTZ
- 2-ST. PETER'S CHURCH, SIGURD LEWERENTZ
- 3-MODERNA MUSEET, THAM & VIDEGÅRD
- 4-IKEA MUSEUM
- 5-MALMO OPERA, SIGURD LEWERENTZ
- ...OCH MER!



PART II

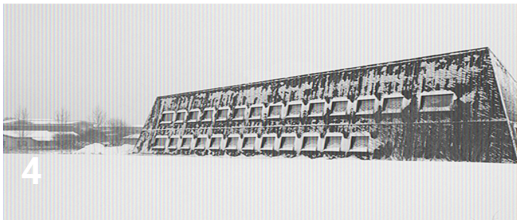
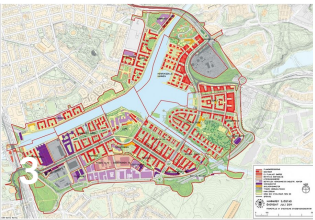
LINKÖPING/STOCKHOLM

1-LINKÖPING WTE

2-ENVAC WASTE HANDLING

3-HAMMARBY "ECO-DISTRICT"

4-THE CATHEDRAL, PETRA GIPP

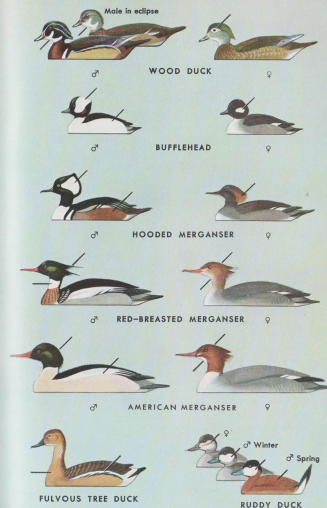
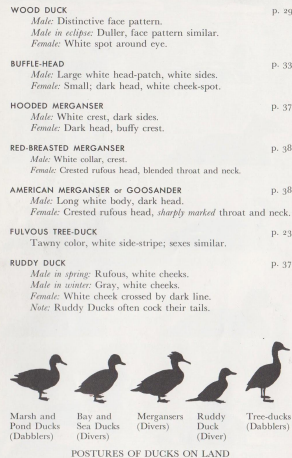




PART II STOCKHOLM

- 1-NATIONAL LIBRARY, GUNNAR ASPLUND
- 2-WOODLAND CHAPEL, GUNNAR ASPLUND
- 3-ST. MARK'S CHURCH, SIGURD LEWERENTZ
- 4-STOCKHOLM U. LIBRARY, RALPH ERSKINE
- 5. MODERNA MUSEET STOCKHOLM
- ...AND MORE!

MERGANSERS AND OTHER DUCKS



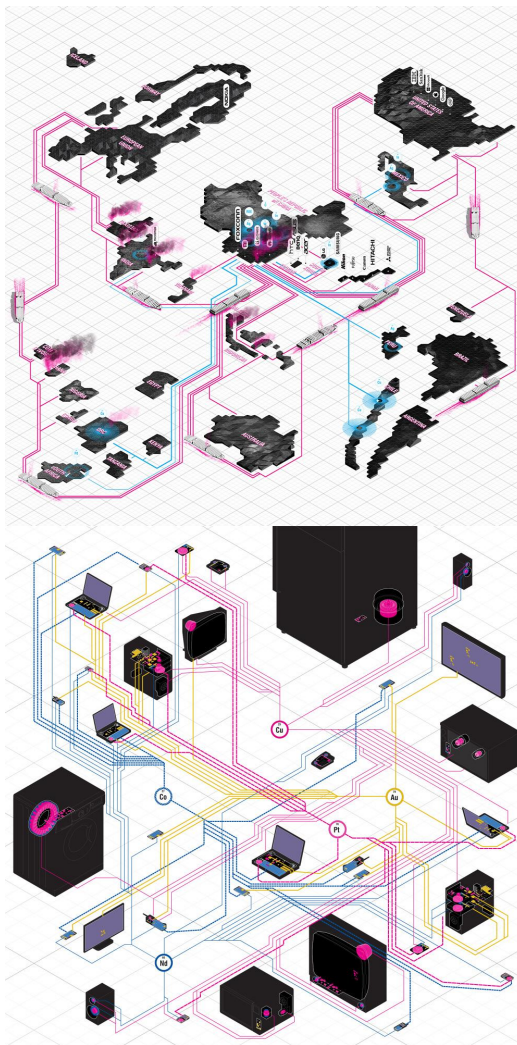
OUTPUT MODELS

FIELD GUIDE
(PETERSON'S FIELD GUIDE TO BIRDS)

RECOGNITION MANUAL
(US NAVY)

SYSTEMS DRAWINGS
(LATERAL OFFICE, STATES OF DISASSEMBLY, 2017)

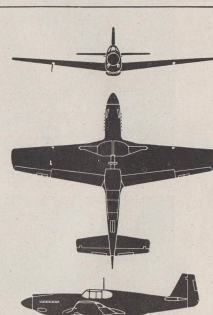
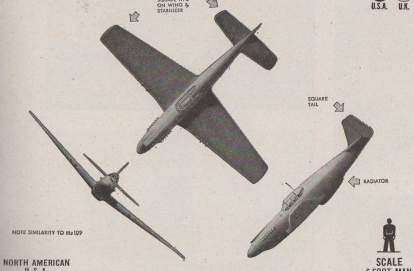
BROADSHEET POSTER



ARMY: P-51
P-51 series
A-1
R.A.F. MUSTANG

FIGHTER
U.S.A. U.K.

P-51 "MUSTANG"



DISTINGUISHING FEATURES: Single in-line engine low-wing monoplane with long pointed nose. Wings have full dihedral and are tapered to nearly square tips. Long radiator mounted under fuselage extends aft of cockpit enclosure. Single fin and rudder is tall with a square top.

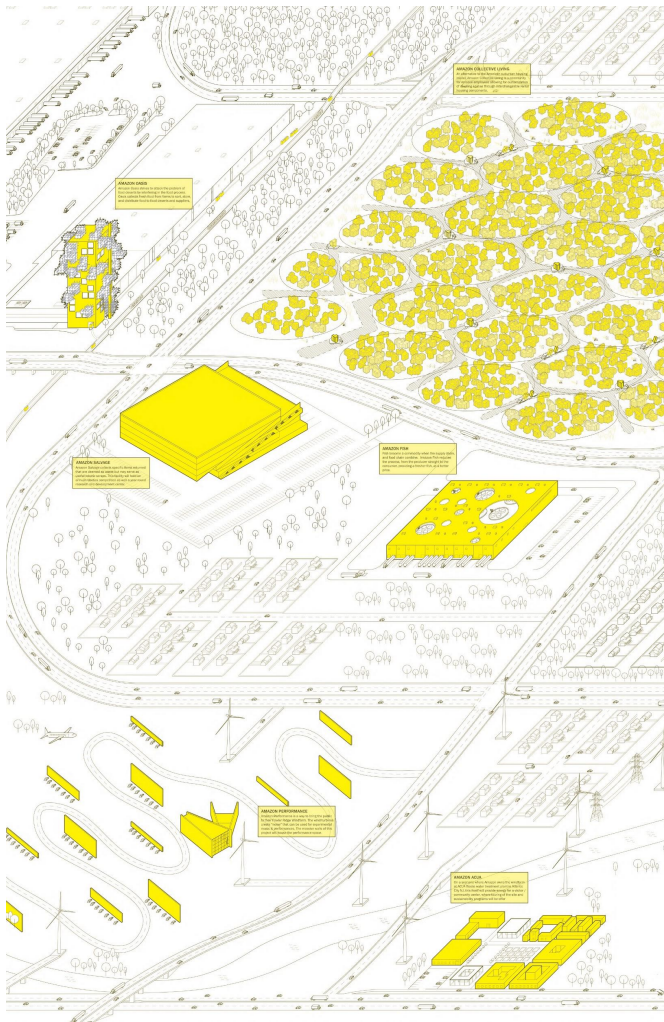
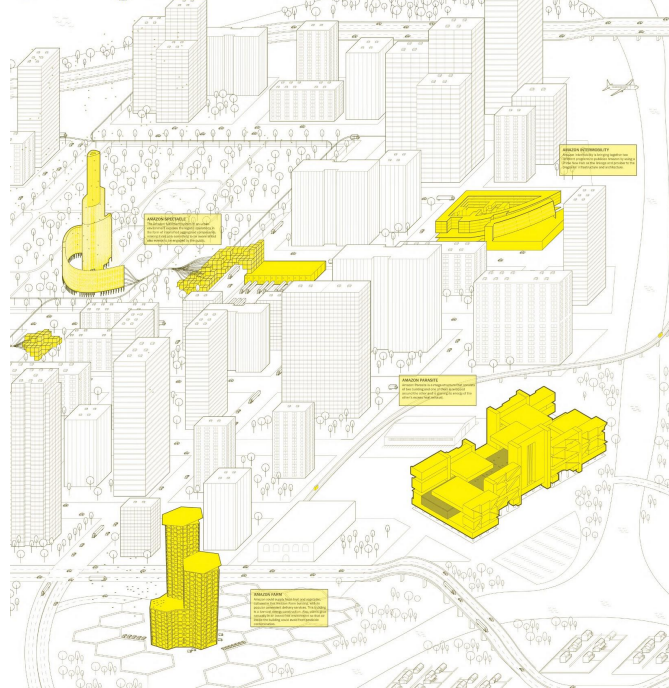
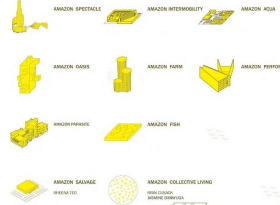
INTEREST: The Mustang was developed quietly and attracted little public notice until used by the British during the dramatic Commando raid on Dieppe. Although this aircraft has been used on fighter sweeps over Europe, a large part of its job in the war may prove to be that of strafing and reconnaissance. In this capacity it is joining the Tomahawk (P-48) and the Lightning in British Army cooperation squadrons. An outstanding virtue of this aircraft is its speed near the ground. A bomber version fitted with dive brakes, the A-36, is now in service for ground-air support.

DATA: 1945
FROM DATA CURRENTLY AVAILABLE

ARMY DEPARTMENT P-51-10
NAVY DEPARTMENT P-51-10

AMAZONVILLE BETA

Amazonville Beta is a conceptual urban planning project for the Amazonian region of South America. It is a response to the need for a sustainable, resilient, and inclusive urban environment that can support the growth of the Amazonian economy while preserving the region's natural resources and cultural heritage. The project is based on the principles of Amazonian urban planning, which emphasizes the importance of the Amazonian rainforest and the need for a sustainable, resilient, and inclusive urban environment.





The Royal Danish Academy of Fine Arts,
Schools of Architecture, Design and Conservation



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