Dextra

TRANS MIDDLE EAST 2023

Dextra

FORWARD

SESSION 5 - Port Technology and Integrated Solutions: Transformation and Implementation of Smart Port Initiatives

Use of Composite & Steel Materials and Precast Technology in Marine Structures

FEATURED SPEAKER

Julien Raybaud-Gines,

General Manager - Bar Systems, Dextra Group

40 FORWARD

Started in 1983 by French entrepreneurs, Dextra has grown to be one of the biggest globally recognized names in the engineering and construction industry.

2023 marks the 40th year of existence of the Dextra Group.

Dextra recognized the ongoing change in expectations and needs within the industry and thus, places great focus on specialized resources to better current solutions as well as creating and delivering new products and solutions to an ever changing market whilst keeping sustainability of both resources and environment at heart.

This continuous growth of the group, and its unmatched ability to service a global network is directly attributable to its values and mission to quality, performance, integrity and engineering of new solutions

This is why, for our 40th anniversary, we focus on “forward”.

What is to come will be more important to drive both the construction industry, as well as the human ability to thrive, work, create new ideas and reach new milestones than what has passed.

We focus on the future and align our business in this way.

Leader in concrete reinforcement solutions

Over 40 years of experience on the world's most prestigious projects

Integrated engineering & manufacturing products & equipment

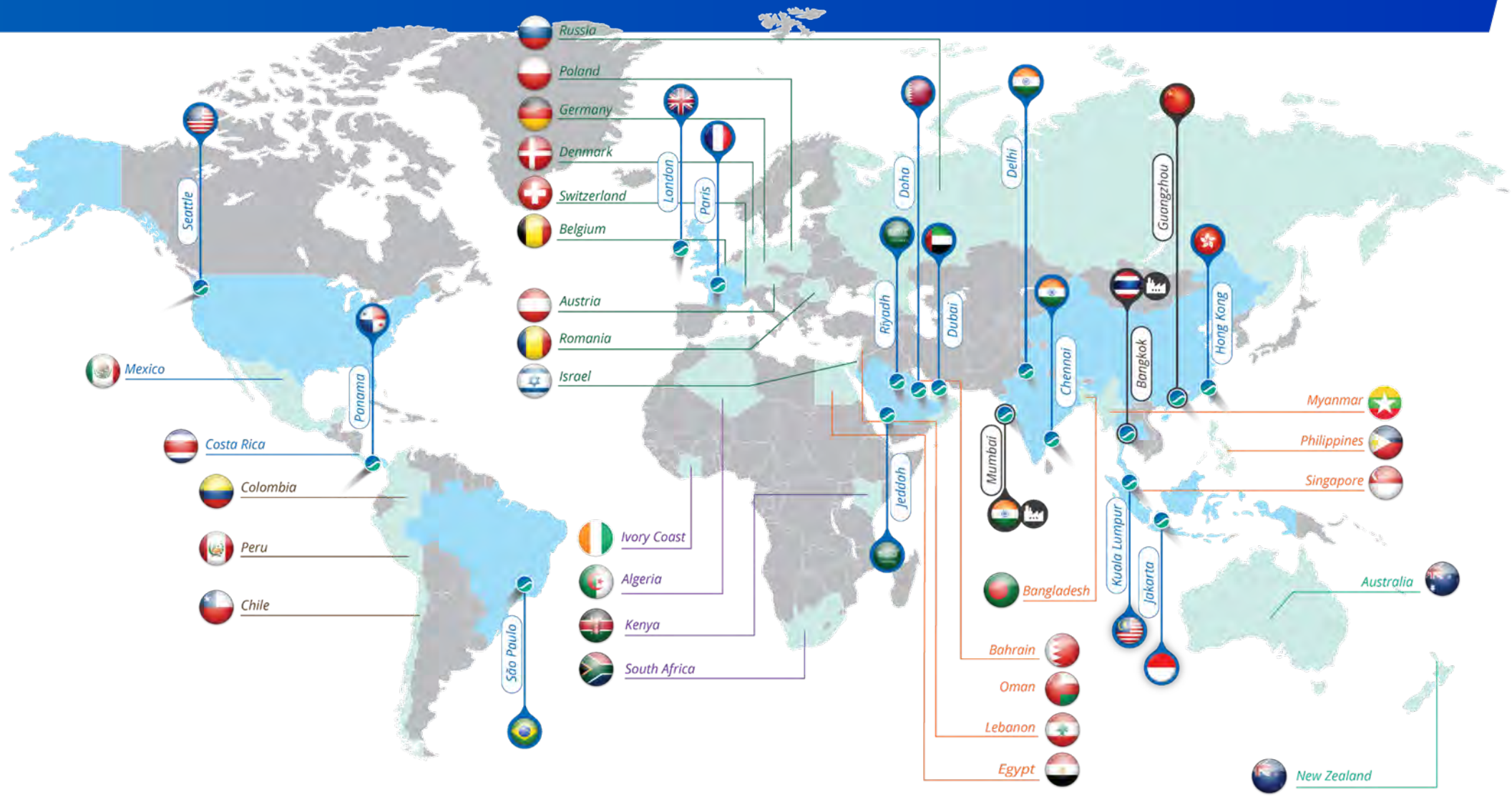
80+ fabricators & distributors worldwide

International & local contractors

Landmark projects: high-rise, infrastructure and energy projects

Compliance with international standards, approved by major consultants

Global Presence



80+ Distributors – 12 Offices – 3 Factories

Manufacturing Capabilities

Bangkok, Thailand

Mumbai, India

Guangzhou, China

Challenges and Opportunities for Port and Shipping Construction

Speed of execution & increase in productivity

Sustainability & Durability

INNOVATION

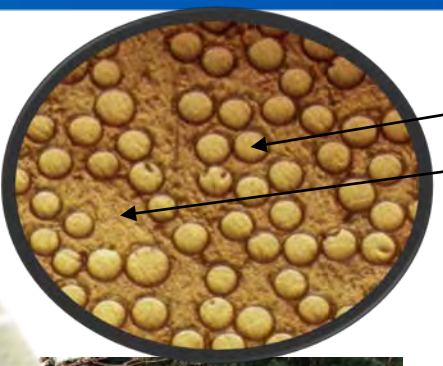
Applications
&
Materials

Production processes

Quality & Safety

Modularity

DEXTRA Fiber Reinforced Products



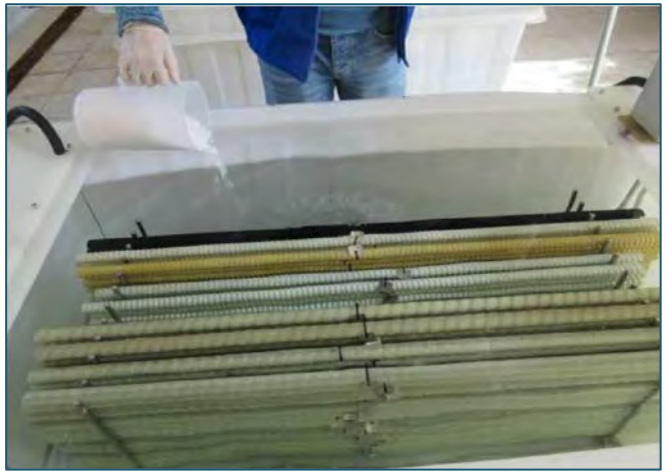
ASTEC

The perfect Alternative To Steel

Stronger & Lighter than steel
- 2x the tensile strength of steel
- 1/4 weight of a steel bar of same diameter

Non-corrosive, non-conductive
- Material doesn't corrode and offer high resistance to chlorides and alkali.
- Particularly suitable for environments exposed to water, salt, & humidity.
- Non-conductive. It's the perfect reinforcement solution for high voltage currents and magnetic fields.

Simplified Installation
- Delivered in straight bars up to 11.8m or in coils.
- Labor required for installation reduced by 2x to 3x.

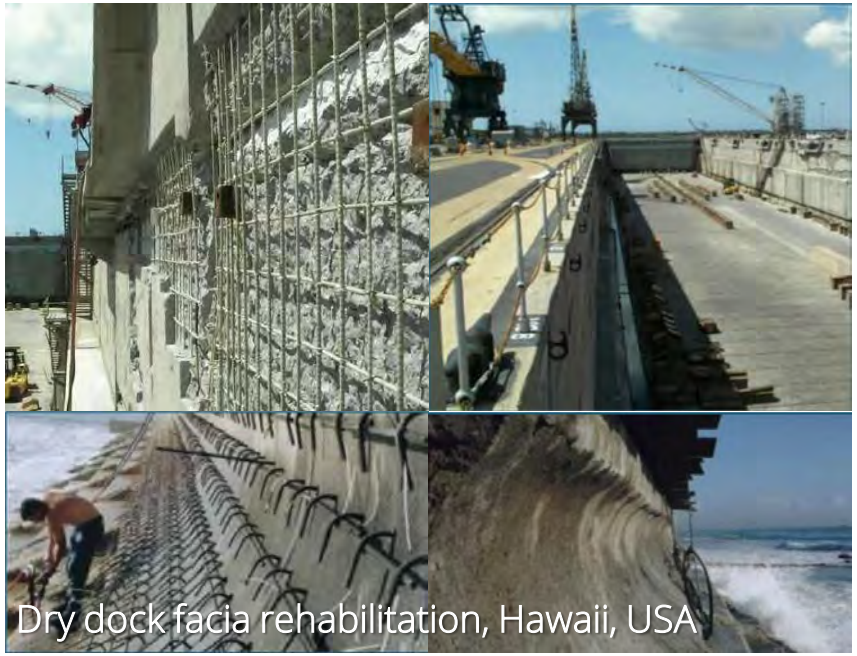


Material is safe & easy to handle, requiring much less labor for installation, generating both time & money saving.

Durable material, allowing to design for a longer lifetime of the structure. As no maintenance nor repair work is needed, ASTEC generates savings during the whole project life.

Sustainable material, with significantly less energy required & CO_2 emission, both at production stage and for its transportation & installation.

Marine Applications



Dry dock facia rehabilitation, Hawaii, USA

Dock of Aramco, KSA

Elizabeth Quay, Australia

Jizan Flood Mitigation Channel,
Saudi Arabia

Marine Applications

Construction of Quay & Jetty

Outer skin of wall in contact with sea-water

Marine Applications

Storage of Oil & Gas at Port Terminal

Marine Applications

Dry-Dock Rehabilitation

Grid of 19mm (#6) GFRP bars doweled and epoxied in place

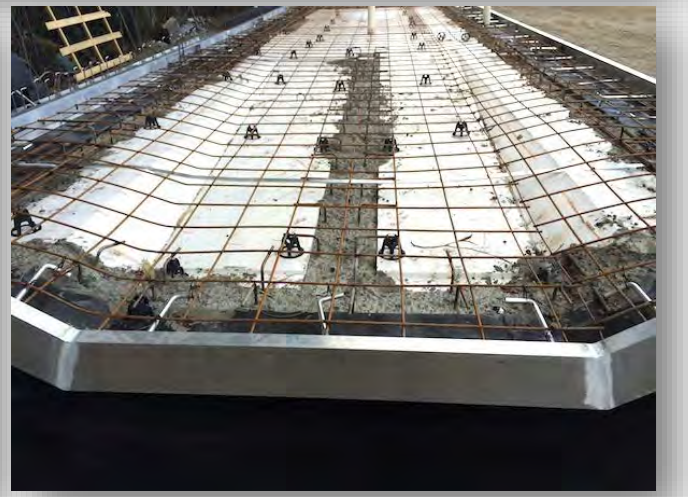
Marine Applications

Jetty Repair / External Strengthening

Concrete with GFRP dowels & post-tensioned steel bar

Marine Applications

Platforms and Floating Structures



Precast and Composite Materials at glance

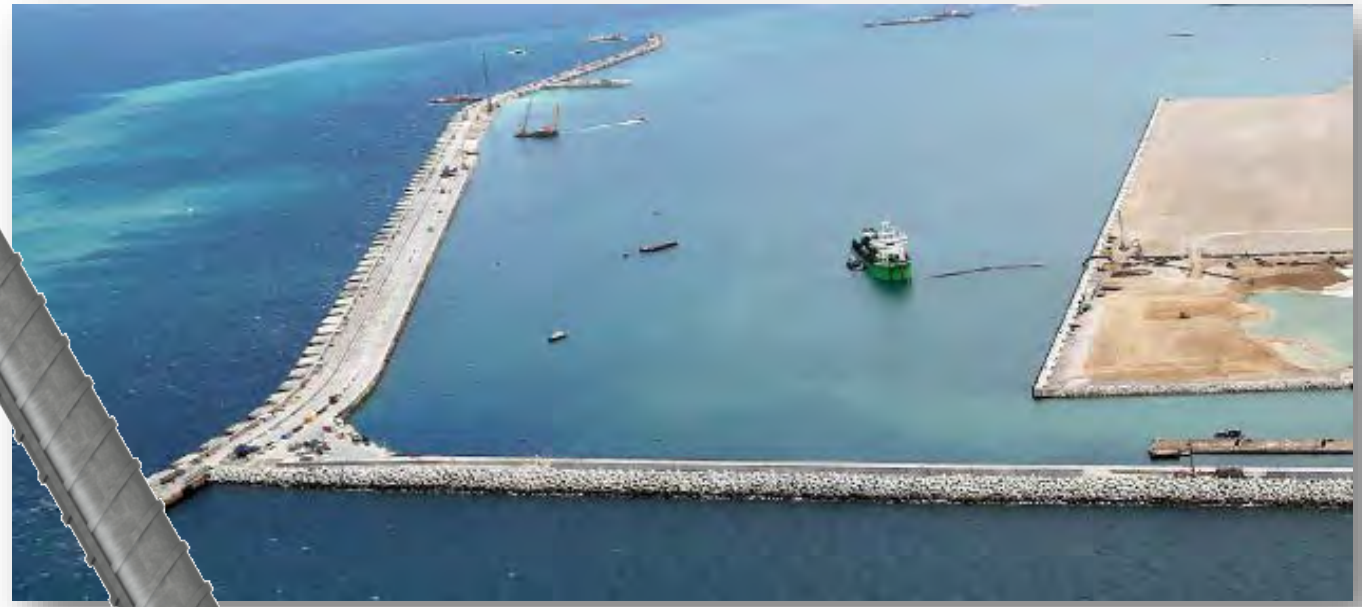
Marine Applications

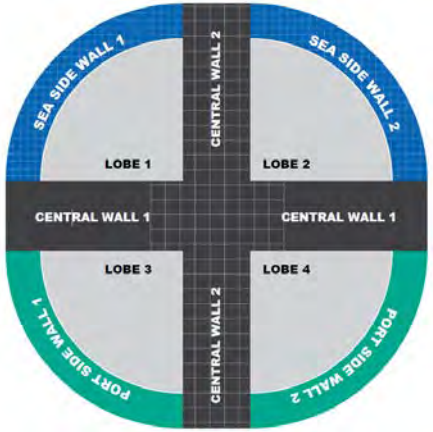
Sea Walls

Precast and Composite Materials at glance

Marine Applications

Caissons Structures





Dextra Couplers = splicing Systems designed for the connection of concrete reinforcing bars

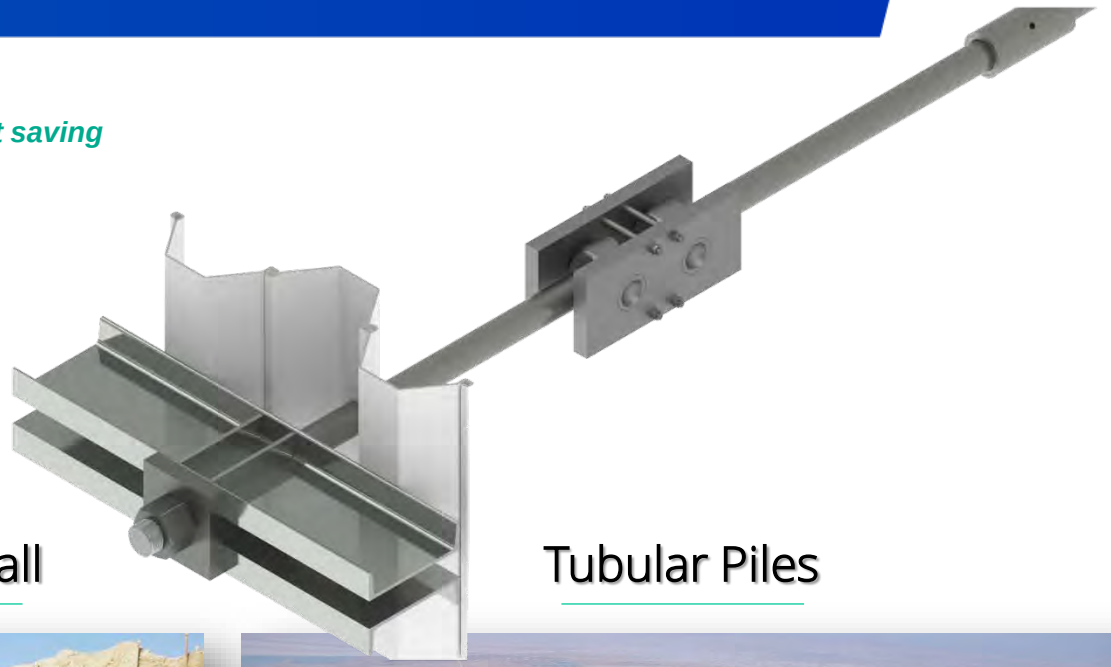
DEXTRA Marine Tie Bars

Short installation time thanks to reduced assembly scope

Cost saving

Control over delivery sequence

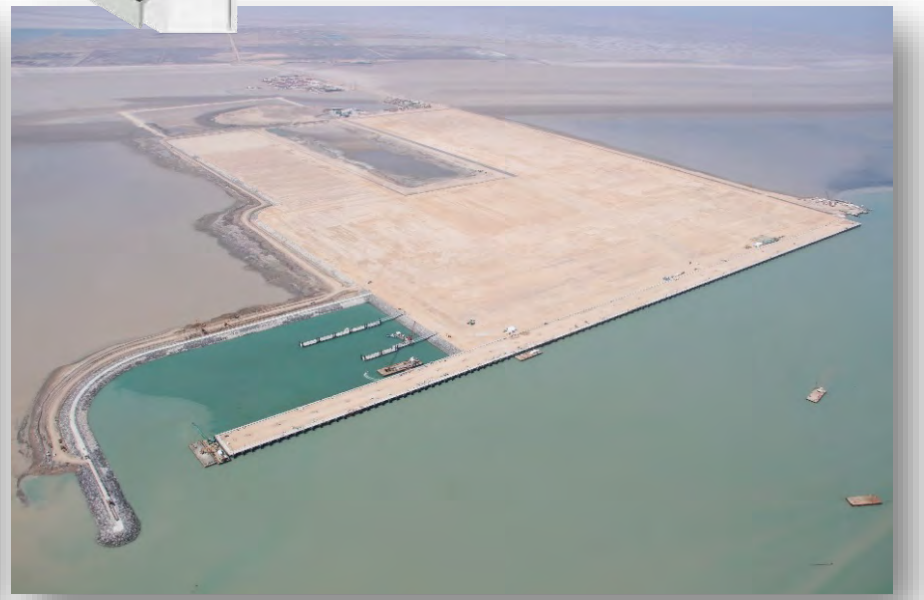
Overall efficiency in detailed design phase



Steel Piles

Diaphragm Wall

Tubular Piles



DEXTRA Marine Tie Bars

Increase steel grades, reduce diameters and go "lighter"

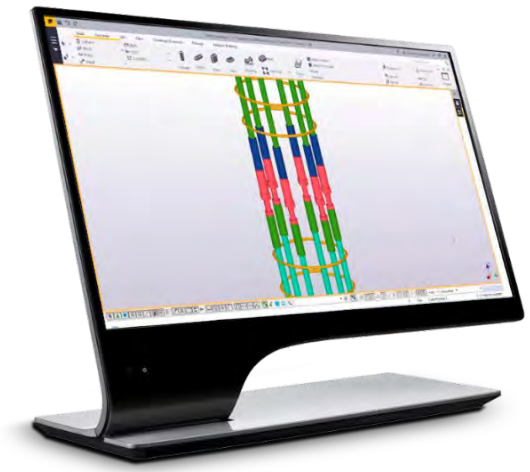
For a given working load of 4,400 kN

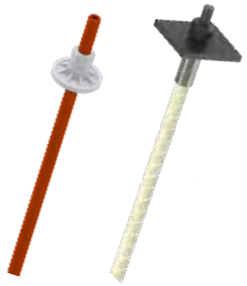
Grade	500	700
Diameter	110 mm	95 mm
Weight per lm	75 Kg →	56 Kg

Up to 25-30% savings
for the contractor with Grade 700

CAD & BIM Technical Tools

- **Get fast and precise 2D & 3D design**
- **Easy to use**
- **Up-to-date libraries**
- **Dedicated support**





	Ground Engineering	Tension Rods	PT Bars	Marine Tie Bars	Rebar Couplers
AUTODESK AUTOCAD		✓	✓	✓	✓
Tekla		✓	✓	✓	✓
AUTODESK REVIT		✓	✓	✓	✓
rocscience	✓				

ESG Responsibility

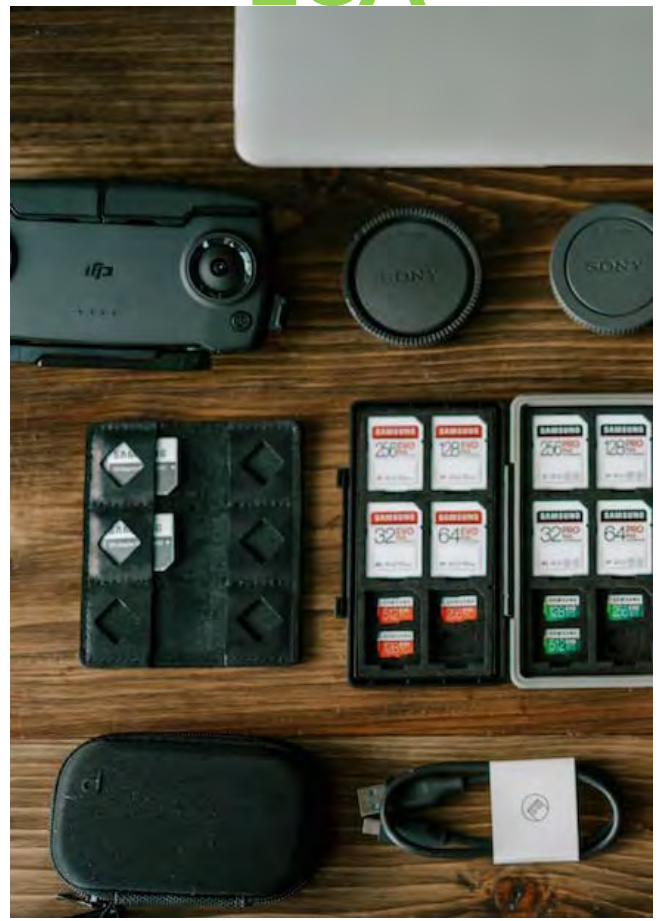
Production Policy

Production Policy

01 IFC

02 ISO 14001

03 LCA



THANK YOU.

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