



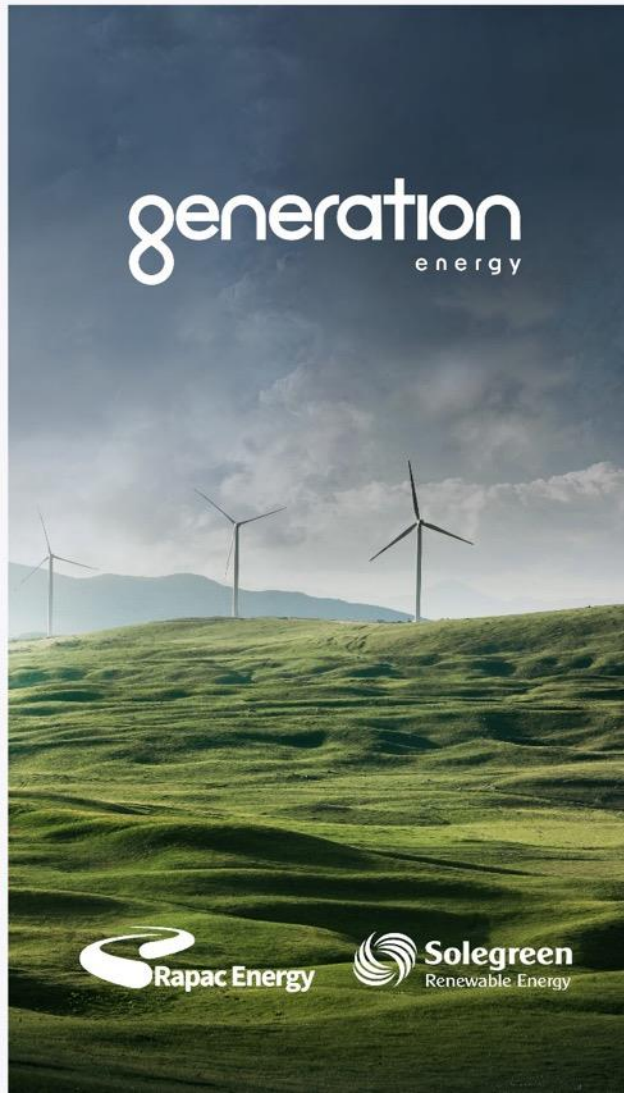
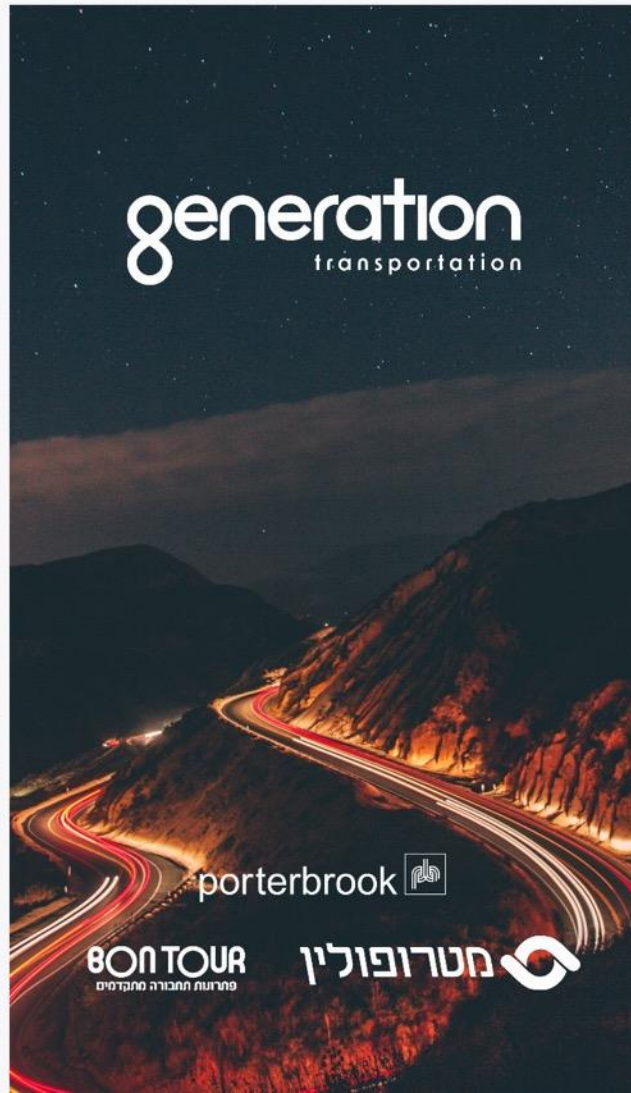
# Company Presentation 2023





# generation

Israel's First & Largest Listed Infrastructure Investment Fund





# bluegen

A Leading Global Environmental Solutions Provider



**Founded in 1988**



**Owned by Generation  
(80%) and Migdal (20%)**



**Vast experience in  
mega PPP projects**



**1,050  
Employees**





Innovative Water Solutions for a Sustainable Future



ges

Global Environmental Solutions

aqwise

Aqwise technologies

aqana

Anaerobic wastewater  
treatment solutions





# Our Services

## EPC – Engineering, Procurement & Construction

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Full turnkey projects:  
For a seamless delivery

## Technology & Equipment

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Proprietary (process)  
technologies, design services  
and advanced equipment

R&D

## Financing Solutions

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PPP/DBO solutions

## Full O&M Services

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Designated, highly trained  
onsite experts, advanced  
monitoring systems







# Serving Clients Across all Industries



Municipalities



Local utilities



State water agencies



Food & Beverage



Oil & Gas



Chemicals & Pharma



Mining & Metals



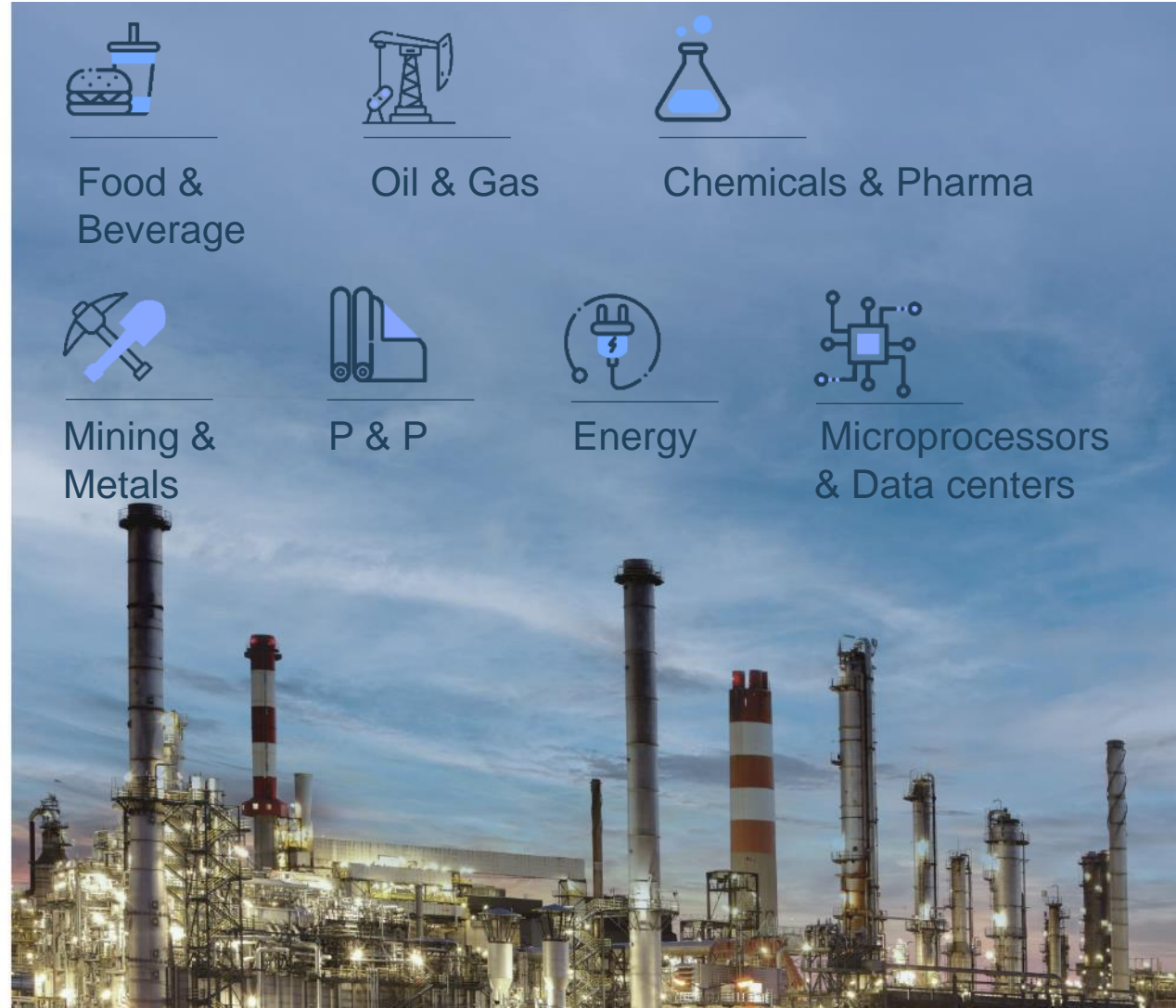
P & P



Energy



Microprocessors & Data centers





# Completing the Water Cycle

1

Treatment & reuse  
of industrial wastewater

2

Treatment & reuse  
of municipal wastewater

3

Industrial water

4

Desalination

5

Ground Water  
Remediation







# Solutions & Technologies

In-house proprietary process

AGAR® MBBR

MBDEN™

ABC carriers™

genSBR™

AGAR® IFAS

AGAR® MC

SBRO™

Capsule™

genMBR™

DACS®

MinbBrine™

AGAR® PnP

genRemin™

genPreWater™

genDesal™







# Water is our Essence



Endorsing ESG targets



Israeli-based desalination solutions provider



Empowering locally, impacting globally



Completing the water cycle



Proven track record of O&M WWTP & WTP



Innovative proprietary solutions





Over 4 Decades of Successful Implementation

**43M**

Nm<sup>3</sup>/year produced Biogas

**515M+**

m<sup>3</sup>/year treated wastewater

**280M+**

m<sup>3</sup>/year treated water

**470+**

Industrial deployment

**60+**

Countries worldwide

**550+**

Municipal installations



# Working with Tier 1 Corporates







# Serving Municipalities & Water Companies Worldwide





## O&M Excellence

Digitized & monitored wastewater & water plants worldwide



620,000 m<sup>3</sup>/d

SWRO and BWRO  
Desalination plants

130,000 m<sup>3</sup>/d

Municipal &  
Industrial WWTP

30,000 m<sup>3</sup>/d

Industrial water  
plants

Over 100

Operation  
Specialists





Empowering Locally, Impacting Globally



Israel



Spain



Mexico



India



Poland



The Netherlands



Italy



Morocco



Hungary



USA



Taiwan



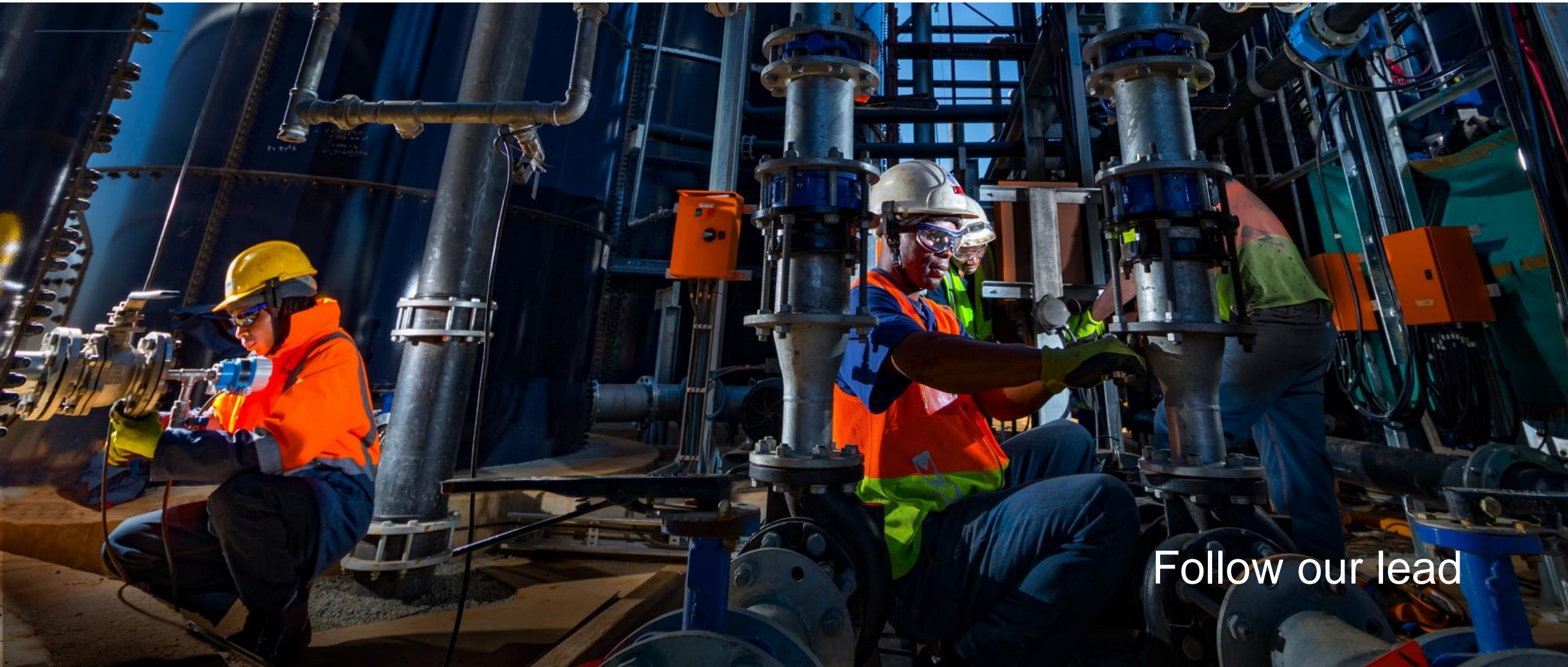
Germany



UK



Efficient & Creative, Tailor-made Solutions



Follow our lead



# Seawater Desalination

Coping with water scarcity

## Highlights

- Client: Israel Water Authority
- Location: Palmachim Israel
- Sector: Utilities
- Capacity: 300,000 m<sup>3</sup>/d

## Challenges

- Minimal footprint
- Possibility for extension
- Minimal energy consumption

## Solution

- Full EPC
- Two times capacity expansion
- Full O&M for 25 years

## Advantages

- Unique operational mode
- Highest capacity per square meter
- Energy saving processes





# Industrial Wastewater Reuse

Producing alternative water Source

## Highlights

- Client: Bazan Oil Refineries
- Location: Haifa, Israel
- Sector: Oil and Gas
- Capacity: 15,600 m<sup>3</sup>/d

## Challenges

- Refurbishment of existing WTP
- Superior produced water quality
- Stringent discharge standards to the nearby river
- High recovery rates

## Solution

- MBR-RO -IEDI process
- Product: Cooling tower makeup (<100 µS/cm), Demin water (<0.1 µS/cm)
- Recovery rate: Overall 60%

## Advantages

- Robust process
- Minimal need for CIP processes
- Maximal recovery rate according the discharge standards





# Anerobic Wastewater Treatment

Converting industrial wastewater into green energy

be 23 ton COD/day, and the m3/d should be as 'm<sup>3</sup>/d'

## Highlights

- Client: Zuvamesa
- Location: Valencia Spain
- Sector: Food & Beverage
- Capacity: 23 ton COD/d  
m<sup>3</sup>/d 25T

## Challenges

- No available area
- Retrofit of existing plant
- 80% degradation via anaerobic process
- Seasonal peaks requiring an adaptive process

## Solution

- Integrating DACS<sup>®</sup> system into an existing system

## Advantages

- Durable & flexible process
- Cost efficiency
- Possibility for usage of existing infrastructure
- Efficient energy recovery & environmentally friendly processes



# Industrial Wastewater Treatment

Ensuring process stability with seasonal picks

## Highlights

- Client: Coca cola
- Location: Baku, Azerbaijan
- Sector: Food & Beverage
- Capacity: 2700 m<sup>3</sup>/d Industrial; 50 m<sup>3</sup>/d Municipal

## Challenges

- Limited area
- Cold weather
- Corporate discharge limits
- Seasonal peaks

## Solution

- AGAR<sup>®</sup> MBBR + Aqwise Media Clarifier configuration

## Advantages

- Durable & flexible process
- Adaption for cold temperatures
- MC to minimize solid separation footprint





# Brackish Water Desalination Plant

Cost effective desalination

## Highlights

- Client: Mekorot
- Location: Kfar Masaryk, Northern Israel
- Sector: Municipal
- Capacity: 16,500 m<sup>3</sup>/d

## Challenges

- Adaptivity to capacity increase
- Reducing chemicals demand
- Minimizing hazardous materials storage

## Solution

- MMF/UF/BWRO plant
- Partial treatment via UF
- Electro chlorination

## Advantages

- Optimal recovery rate
- Treat and mix model
- Onsite hypochlorite production





# Demineralized Water Production

Ensuring process water source for power stations

## Highlights

- Client: Siemens
- Location: Yerevan , Armenia
- Sector: Power generation
- Capacity: 2x96 m<sup>3</sup>/d

## Challenges

- Minimal footprint
- High recovery rate

## Solution

- UF/RO/EDI process
- Recovery rate: Overall 92%
- Capsule® structure
- Product: Demin water (<0.1 µS

## Advantages

- Optimal recovery rate
- Plug and play
- Offsite operation





# Wastewater Treatment Plant

Producing new irrigation water source

## Highlights

- Client: Regional water utilities
- Location: Acre, Northern Israel
- Sector: Municipal & industrial
- Capacity: 36,700 m<sup>3</sup>/d

## Challenges

- Turning Class B sludge into class A
- Transforming biogas to energy & heat
- Electricity consumption reduction
- High-quality effluent level for irrigation

## Solution

- Customized activated sludge with tertiary treatment
- Transitioning the digester from a mesophilic to a thermophilic state
- Biogas generator installation and operation

## Advantages

- Optimizing processes and operational costs
- Maintenance simplicity requiring minimum staff





Thank you

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for generations to come