The San Diego Blue Economy

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San Diego County Economic Roundtable
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**TMA Definition of the Blue Economy:**

These elements:

- Global ocean economy (*est. OECD $1.5 trillion in 2010*);
- Global water/wastewater economy (*est. $500 billion in 2010*);
- Supporting industries (*e.g. specialized paints, plastics, etc*); &
- **BlueTech** includes both innovative OceanTech and WaterTech (*TMA companies sell across both sectors*).
Global Blue Economy: Enormous and growing

OECD* 2016 study:
The Ocean Economy in 2030

2010 – US $1.5 trillion (conservatively)
2030 – US $3.0 trillion (conservatively)

“The ocean economy is essential to the future welfare and prosperity of humankind...only recently begun to garner attention and move up the international policy agenda.”

Comparison:
2010 global water industry = $500 B
2015 space industry = $355 B

*NOTE: The OECD is a Paris-based organization with 35 democratic country members founded in 1960 to stimulate economic progress and world trade.
Why SD should focus on the **Blue Economy**:

- It is an enormous, growing market
- Every 2\textsuperscript{nd} breath we take is from ocean organisms
- The big 5
  - Food: aquaculture/mariculture essential to feed humanity
  - Water: 97\% of earth’s water in the ocean
  - Ocean energy: inexhaustible, clean, renewable energy
  - Medicine: nature’s uniqueness over millions of years
  - Real estate: water is rising...much infrastructure will float
- It is a defining SD “characteristic”...why we came & are here
Non-profit industry association & cluster organizer

Largest U.S. BlueTech cluster – 95 members

Triple Helix: academia, industry, & policy makers

Create a regional Blue Voice

Just began 12th year

Our Tagline: “Promoting BlueTech and Blue Jobs”®

Our Mission: “Promote sustainable science-based ocean & water industries”
2012: San Diego Maritime Industry Report

- 1,431 companies & organizations (200+ NAICS codes)
- 700+ self-report maritime focus (350+ report over 75%)
- 45,778 jobs and $14 billion+ annual direct sales only
- Maritime technology industries (as a sub-group):
  - Biggest segment with 18,948 jobs
  - $6.2 billion annual revenue
  - Good wages & high exports

Sponsored by San Diego Workforce Partnership, San Diego Regional EDC & The Maritime Alliance

2018: Update

- Discussing funding for an updated SD study
- TMA is SME for 1st ever US BlueTech satellite account
Comparative industry clusters in San Diego

- **Advanced manufacturing:** 2,800 manufacturers with 100,000+ workers
- **Sports & Active Lifestyle Industry:** 4,000+ jobs
- **ICT:** 64,000 jobs & $8.5 billion “in GDP annually”
- **Defense Industry:** 108,000 employees & $28.7 billion annually
- **Aerospace industry:** 35,000 jobs
- **Cybersecurity:** 3,500+ jobs & $1.5 billion “in total economic impact”
- **Cleantech Industry:** 8,000 jobs
- **San Diego Lifesciences:** 34,000 jobs & $14.2 billion “in direct economic impact”
- **Maritime Industry (2011):** 46,000 direct jobs & $14 billion revenue

Source: San Diego Regional Economic Development Corporation 2016

*TMA leading U.S. BlueTech cluster & leading intl. cluster*
Partner Organizations
**TMA** is focused on collaboration across the **Triple Helix**: Academia, Industry, and Policy for a regional **Blue Voice** & **Blue** opportunity.
BlueTech in San Diego – Today & Tomorrow

**The Present** (you need the ocean for the Blue Economy!)
SD is one of the largest BlueTech centers in the world
Fast growing companies with 40 – 60% exports
Good-paying blue & white collar Blue Jobs across traditional & BlueTech sectors
Virtual incubator for years....launched BlueTech Incubator in October 2017
TMA recognized nationally and internationally

**The Future** (potential to be 1 of top 5 BlueTech centers in the world)
Need to create entrepreneurs
Need to have a home-educated workforce
Need financing for the industry
Educational outreach & funding:

• “Workforce of Tomorrow” track part of annual BlueTech Week;
• TMA manages San Diego SeaPerch chapter (national SeaPerch program)
• Awarded $400,000 over 4 years to develop Blue Economy career pathway job videos and launch a 1st in the world BlueTech Jobs website;
• Partnership with San Diego Unified School District (SDUSD) to develop BlueSTEM Academy & Career Pathway. Goals are to align industry needs with the student experience & create a national model;
• New programs including a 4-day summer Blue Economy immersion program for HS students (from Blue Collar to BlueTech) and internships;
• BlueTech Foundation at San Diego Foundation will be gathering additional funds and pursing alliances to support BlueSTEM programs in the region; &
• Looking at educational programs through BlueTech clusters internationally.
Promoting educational collaboration in SD:

- 40+ regional organizations focused on ocean/water education working in “silos” with little industry connection.
- **TMA/SDUSD** arranging a meeting to bring them together to:
  - get to know each other;
  - catalogue existing and proposed programs;
  - catalogue existing and explore potential new funding sources; and
  - promote concrete regional collaboration.
"If you want to go quickly, go alone. If you want to go far, go together."

an African proverb

We need each other. We need to collaborate.

Thank you for interest in the Blue Economy.
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