## Compact Container Systems' "SeaFold 40'"

# Collapsible Container Presentation to the Intermodal Asia 2024

By

## **Charlie Santos-Buch**

**Chief Executive Officer** 



May 22, 2024

#### **About Compact Container Systems**

**COMPACT CONTAINER SYSTEMS, LLC ("CCS")**: Founded in 2009 to develop innovative solutions to supply chain problems in the global transportation and logistics industry.

#### **PROBLEM:**

- > Due to global trade imbalance, approx., 20% of all ISO containers return empty to origination point.
- > Empty containers take up invaluable space across all forms of intermodal transportation globally.
- > Management of empty container fleets has become a significant cost.
- > Increased international pressure to reduce CO2 emissions.

#### SOLUTION:

- > The **SeaFold 40'** CCS' 5-in-1 40' foldable high cube ("HC") container.
- > 5 collapsed and bundled **SeaFold** containers take up 1 40' HC container slot.
- > 80% more storage space and less repositioning movements.
- Significant cost savings in the management, movement, and repositioning of empty container fleets
- Collapsed and bundled containers reduce CO2 emissions across all forms of intermodal transit.





## SeaFold 40' Technology Overview

- Built in accordance with all provisions of the ISO 1496-1-2013 and 668 certification standards.
  - Including International Convention for Safe Containers, International Union of Railways, Lloyd's Register, and Bureau Veritas.
- ▷ Passed all ISO and water ingress testing.
- > Highest quality industry standard materials.
  - > Corrosion resistant Corten A steel.
  - > High-quality marine grade paint system.
  - > Built to withstand harsh maritime environments.
  - > Projected life equal or better to a standard HC container.
- > SeaFold 40' has the same features as a conventional 40' HC container.
- > Requires no special handling or maintenance equipment.
- > Safe and easy folding and erecting procedure.
- > Compatible with all standard lift equipment found in most ports and terminals.
- Serviceable by existing maintenance organizations and depots throughout the world.
- > Patent and trademark protection globally.
- > SeaFold 20' and SeaFold 53' technology being developed today.







#### SeaFold Capabilities and Operational Efficiencies

Five (5) collapsed and interlocked **SeaFold** containers can be stored in the same slot as one (1) conventional 40 ft HC.

- Quickly and safely folded or erected in minutes with limited labor and mechanical resources.
- > Compatible with all standard equipment that exist at most major ports, terminals and depots around the world.
- > Semi Automatic twist lock mechanism allows for seamless integration with conventional 40' HCs.

Operational efficiencies of SeaFold containers include:

- Reduction of repositioning costs and empty container movements by truck, barge, rail or sea.
- > Significant storage savings and space maximization in locations with limited real estate such as ports, terminals, and depots.
- Maximize space utilization on marine vessels and rail services by creating additional space for other revenue generating opportunities.





#### Benefits of SeaFold vs Conventional 40' HC Containers

Creates significant cost savings which increases bottom line profitability immediately:

- More efficient loading and unloading, reduced repositioning moves, vessel port time, and reduced crane cycles when lifting bundled units.
- > Quicker throughput times at ports, including associated reductions in storage, logistical and transportation costs
- Improved rail and truck storage 5 collapsed and bundled containers loaded onto a single truck or rail chassis. (subject to local weight restrictions). 10 units can be double stacked on a rail car.

Capital investment recaptured in as little as 2.5 to 3 years depending on cost assumptions and number of turns container makes each year.

➤ Life span of container projected to be at least 15 years. 100% cost savings realized after initial cost recovery.

#### Meaningful environmental benefits:

- Reduces carbon emissions and related carbon footprint by up to 70% on routes utilizing SeaFold containers.
- > Increases the value of potential future carbon credits.
- ➤ Reduces exposure to negative press by taking a proactive approach to CO2 emissions.



**SeaFold's** unique 5:1 design creates 80% more storage and operating efficiencies at terminals, railheads, and ports.

Reduces container lifts and container movements on ships, trucks, rail, and barges.

Up to a 56% decrease in repositioning costs.



## **Environmental Benefits**

- Significant greenhouse gas emissions reduction, especially during return journeys across all modes of intermodal transportation: ship, rail, truck, and barge in a closed loop, unbalanced route.
- Analysis performed by a third-party ESG analytics firm found that, when compared to transportation of empty conventional 40' HC containers, five (5) collapsed and bundled SeaFold 40' containers in one (1) 40' High Cube slot achieved the following reductions in metric tons of CO2 equivalent (CO2e) emissions:

69% reduction in metric tons of CO2e emissions on a shipping route from Los Angeles to Shanghai

49% reduction in metric tons of CO2e emissions on a rail route from Chicago to Los Angeles

**68%** reduction in metric tons of CO2e emissions on a **truck route** equidistant from New York to Miami

**70%** reduction in metric tons of CO2e emissions on a **barge route** from Anchorage to Seattle



#### SeaFold 40' Dimensions

- > Dimensions of five (5) SeaFold 40' containers collapsed and bundled = one (1) conventional 40 ft HC container
- ➤ Weight of 5 x SeaFold 40' collapsed and bundled containers = 65,000 lbs. (29,545 kg)
- > Matches the maximum gross weight capacity of one conventional 40' HC fully laden container = 67,200 lbs. (30,480 kg)
- > Can fit the same number of standard pallets 21 as a conventional 40' HC container

Classification		Dimension (metric)	Dimension (Imperial)	Standard 40' HC
	Width	2,438 mm	8 ft	2,438 mm / 8'
	Height	2,896 mm	9.5 ft	2,896 mm / 9'6"
Internal	Length	11,892 mm	39 ft	12,022 mm / 39' 3.25"
	Width	2,322 mm	7.62 ft	2,352 mm / 7' 8.5"
	Height	2,672 mm*	8.77 ft*	2,700 mm / 8'10"
Door Opening	Width	2,232 mm	7.32 ft	2,330 mm / 7'8"
	Height	2,500 mm	8.2 ft	2,588 mm / 8'5"
Internal Cubic Capacity		73 cu m	2,578 cu ft	76.4 Cu m / 2,697 cu ft
Max Gross Weight		30,480 kg	67,200 lbs.	30,480 kg / 67,200 lbs.
Target Tare Weight		5,896 kg	13,000 lbs.	4,150 kg / 9,150 lbs.
Maximum Payload		24,584 kg	54,200 lbs.	26,330 kg / 58,050 lbs.
Stacking @ 1.8 G		213,360 kg	470,378 lbs.	216,000 kg/134,480 lbs.
Racking Test		150 Kn	33,721 lbs.	150 Kn/33721 lbs.
* 2.692 mm / 8.83 ft at door end				

7

\* 2,692 mm / 8.83 ft at door end



## Summary Benefits

DESIGN BENEFITS	OPERATING BENEFITS	TECHNICAL BENEFITS	ESG BENEFITS
5:1 Design Ratio	Creates operating efficiencies	Utilizes existing intermodal	Sustainable solution across intermoda
	at terminals and ports	equipment and interconnects	supply chain
Creates 4 revenue generating			
slots	Streamlines empty container	Constructed from the highest	Helps satisfy CO2e emission
	repositioning	quality industry standard	requirements
Fully ISO 1496-1-2013 and 668		materials	
Certified	Provides significant cost		Decreases greenhouse gas emissions
	savings for maintaining	Compatible with all current ISO	especially on return journeys
Meets all CSC, UIC, Lloyd's	container fleets	container equipment	
Register, and Bureau Veritas			CO2e Reduction across all modes of
standards	Prevents containers shortages	Easy & safe folding procedure	intermodal transportation
	and surpluses		
		Quickly collapsed or erected in	More efficient and greener handling
	Few stranded/idle containers	minutes	workflow
	Faster throughput of containers	Matches existing container	Cuts down carbon emissions associate
		external dimensions	with port and terminal vehicles and
	Increased operating flexibility		machinery
		Seamless maintenance, repair,	
	Container load/unload time	and overhaul	
	reduced by 80%		
	Container storage space		
	reduced by 80%		
	Reduces operational costs		



#### **CCS Proprietary Information**

The information contained in this document is Compact Container Systems LLC ("CCS") proprietary information and is disclosed in confidence. It is the property of CCS and shall not be used, disclosed to others or reproduced without the express written consent of CCS. If consent is given for reproduction in whole or in part, this notice and any notice set forth on each page of this document shall appear in any such reproduction in whole or in part. The information contained in this document may also be controlled by the U.S. export control laws.

9

