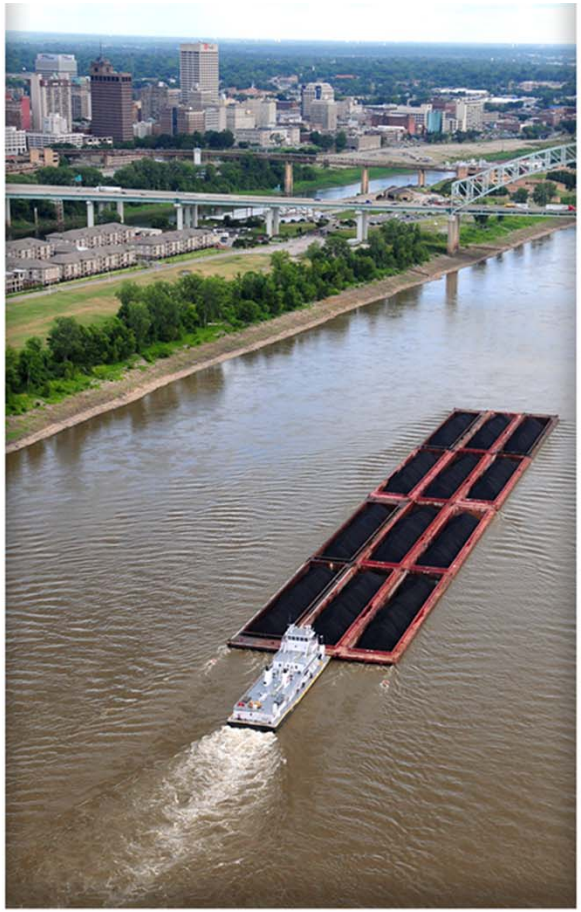
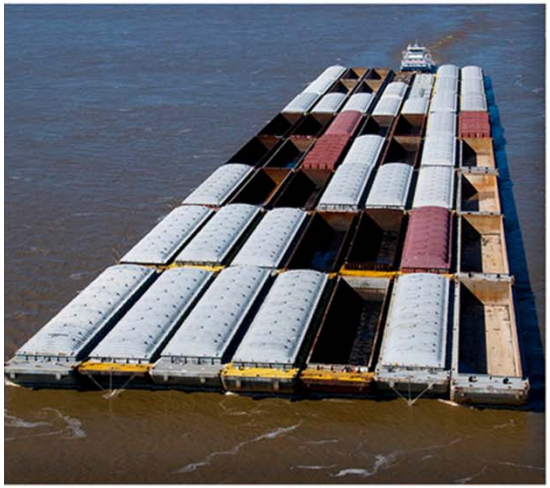
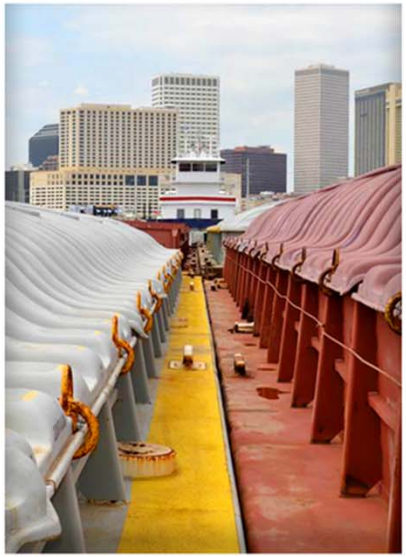




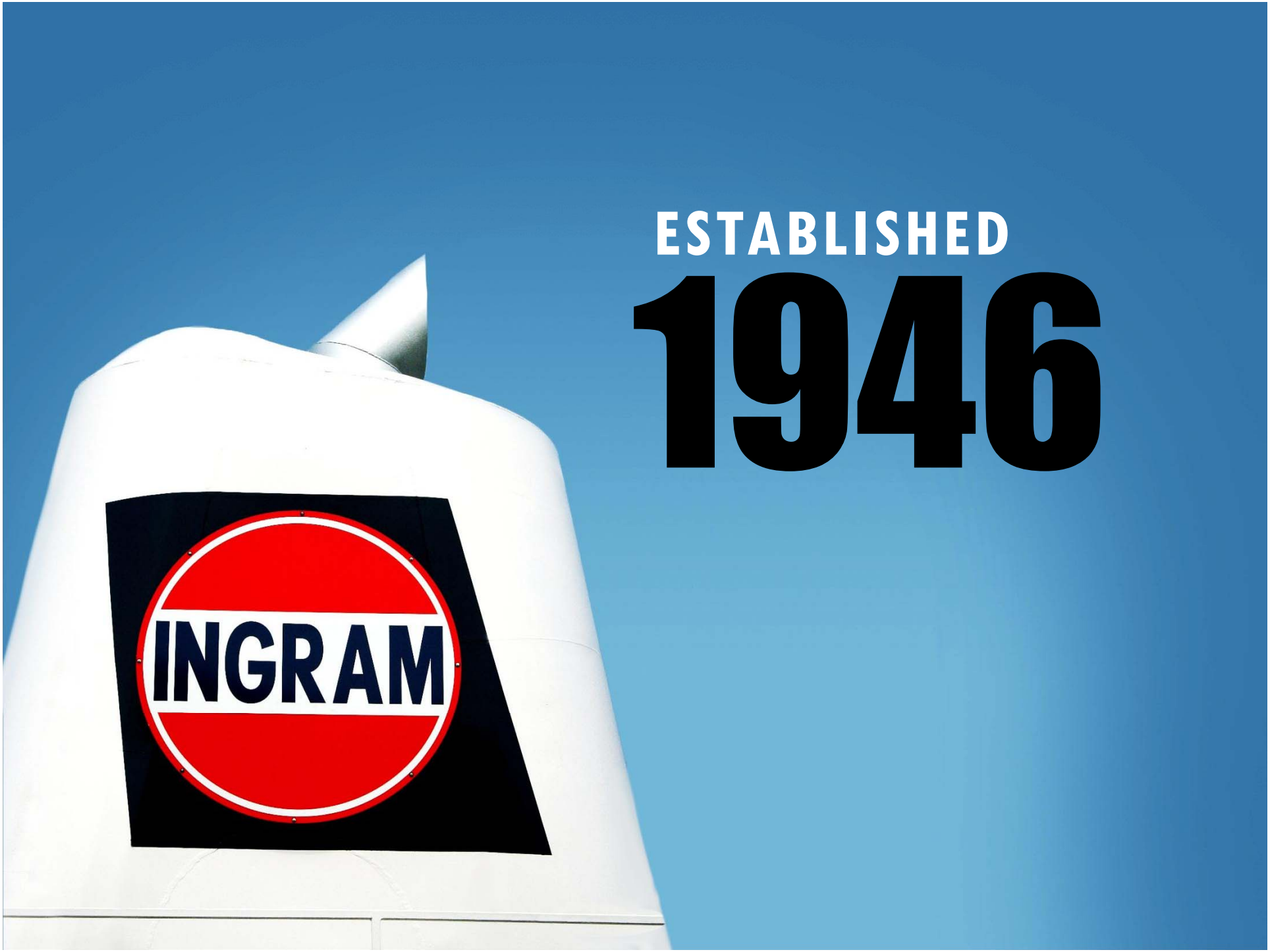


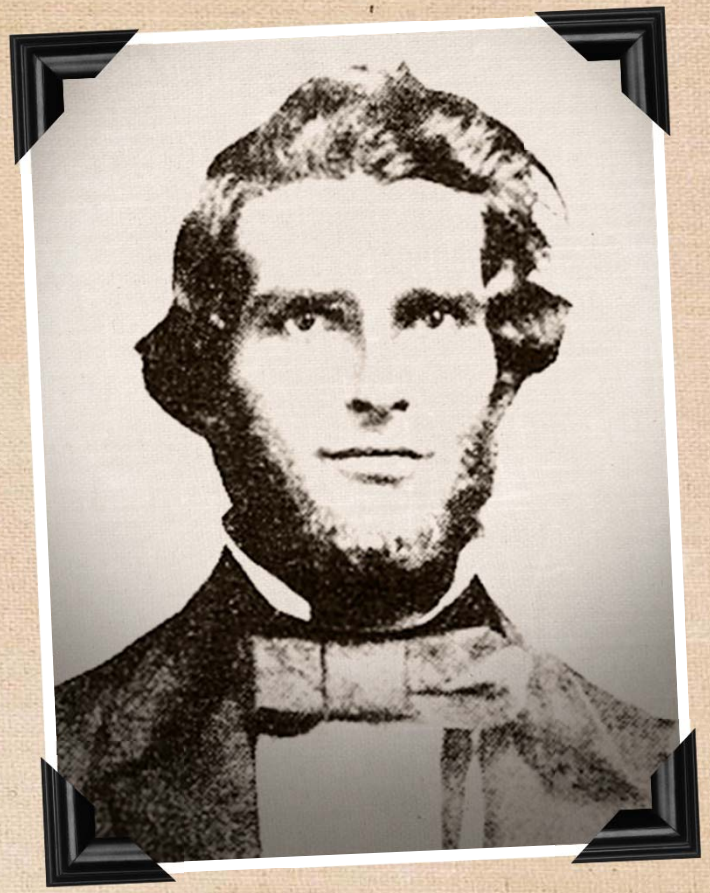
INGRAM BARGE COMPANY

ABS to iLOG

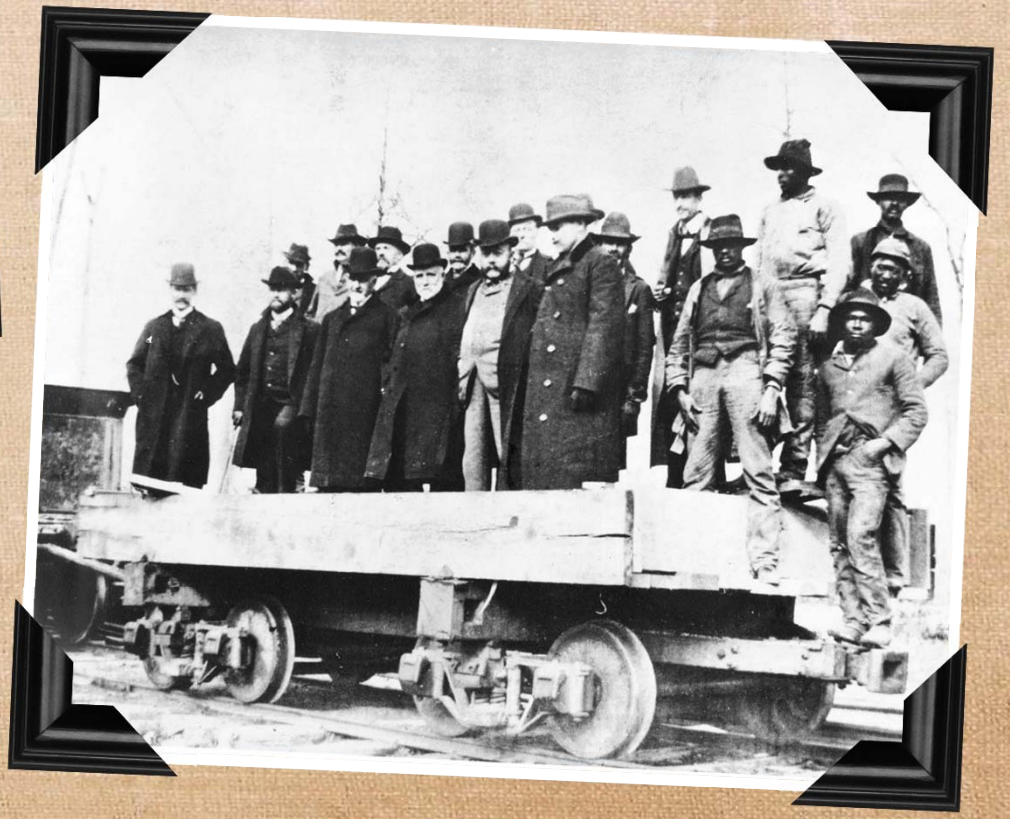
Journey from an "Optimization Aspiration" to Sensible "Decision Support"

DR. CRAIG PHILIP
CEO


ESTABLISHED
1946
INGRAM



Ingram's heritage stretches back to the 1800s, when the Ingram family was involved in logging in the upper Midwest.



The company has changed in many ways over the years,
but Ingram is still on the rivers.

Family-owned and Family-operated

Martha Ingram
Chairman Emerita

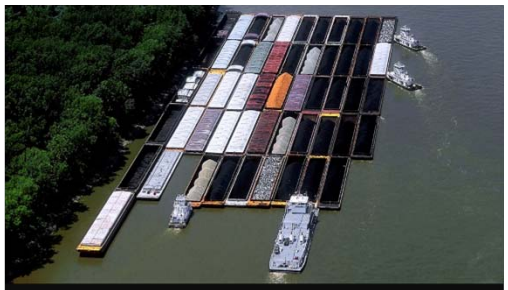
Orrin Ingram
Chairman, Ingram Barge Co.
Pres. & CEO, Ingram Industries

John Ingram
Chairman of the Board


NASHVILLE
BAKER DONELSON
CMT
McFADDEN'S
NASHVILLE
CHARLIE EVERHART
INGRAM
INGRAM BARGE CO.

St. Louis, MO

Paducah, KY



Columbus, KY

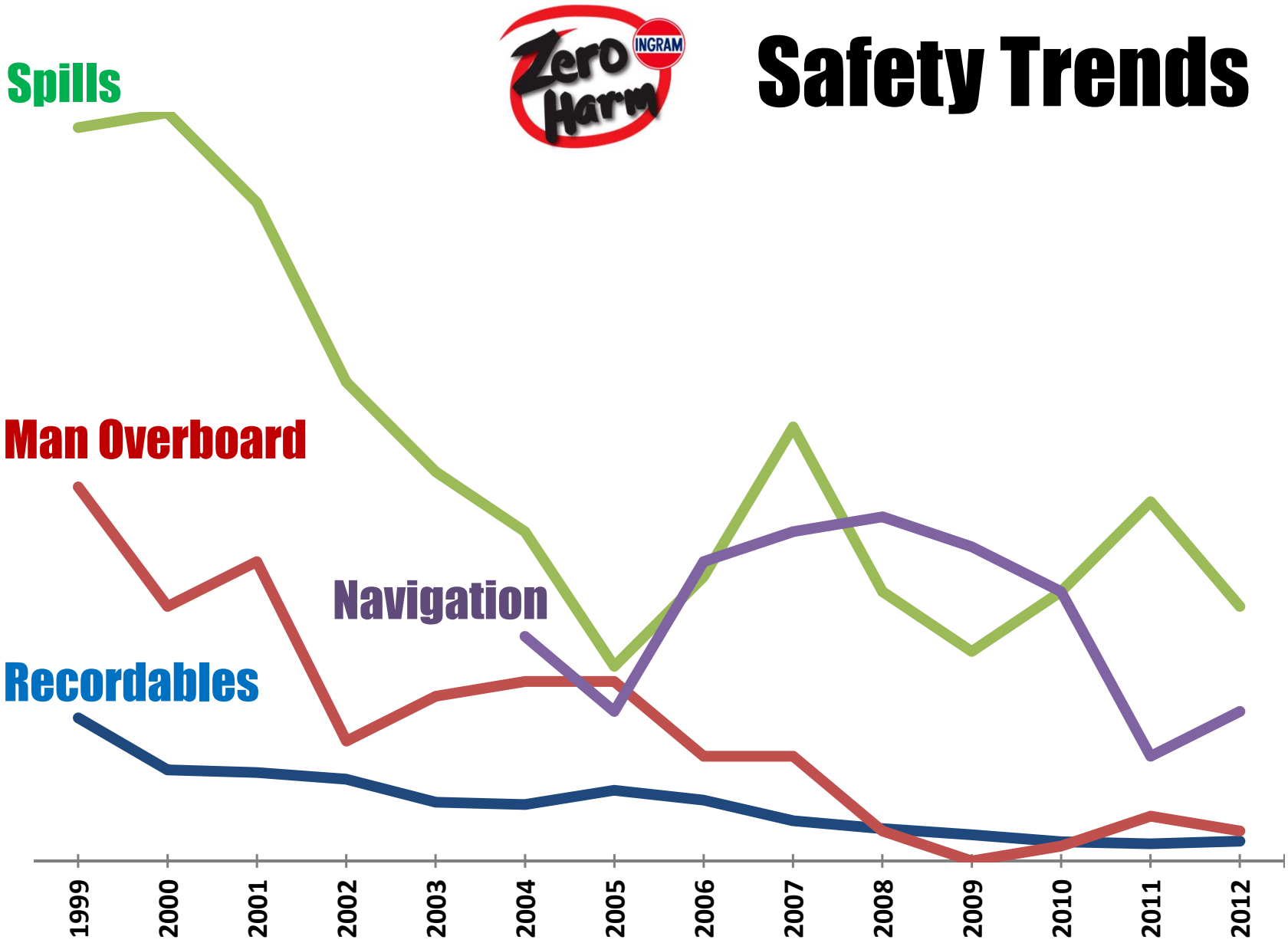
Grand Rivers, KY

Baton Rouge, LA

LaPlace, LA


NGRAM
Safety
Excellence

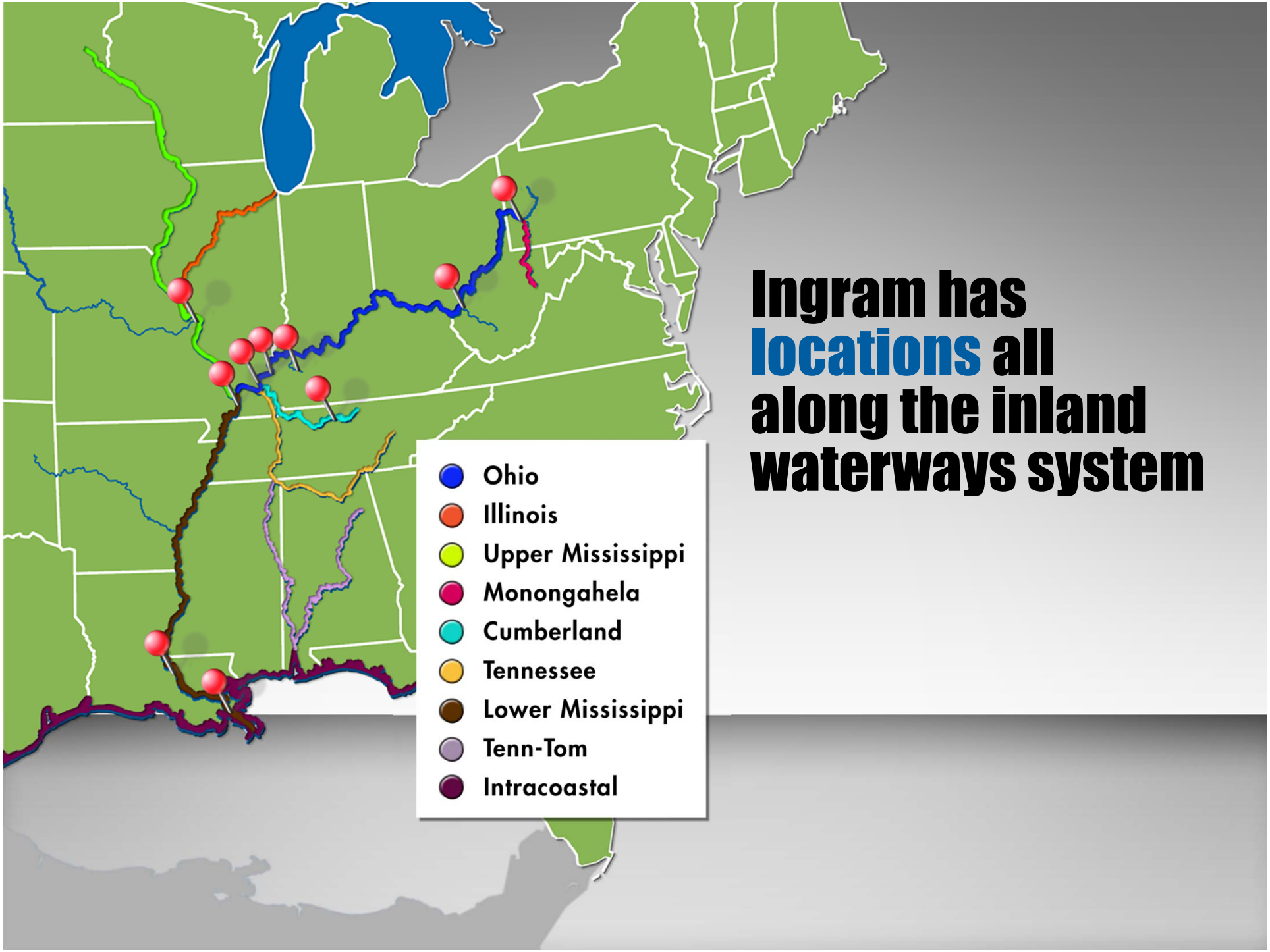
Safety Trends



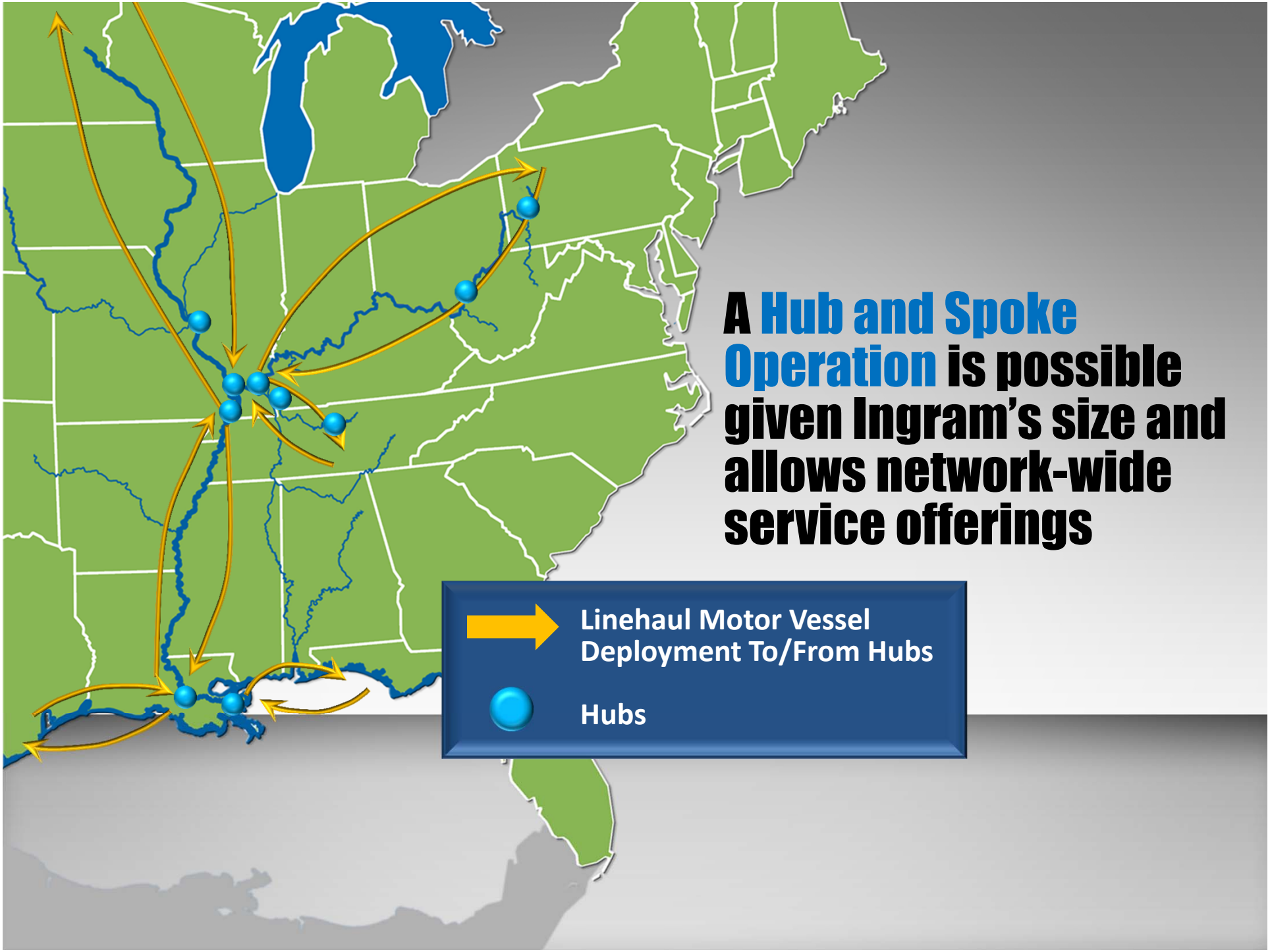

We operate over
140 towboats
INGRAM BARGE CO.
TED W EWING

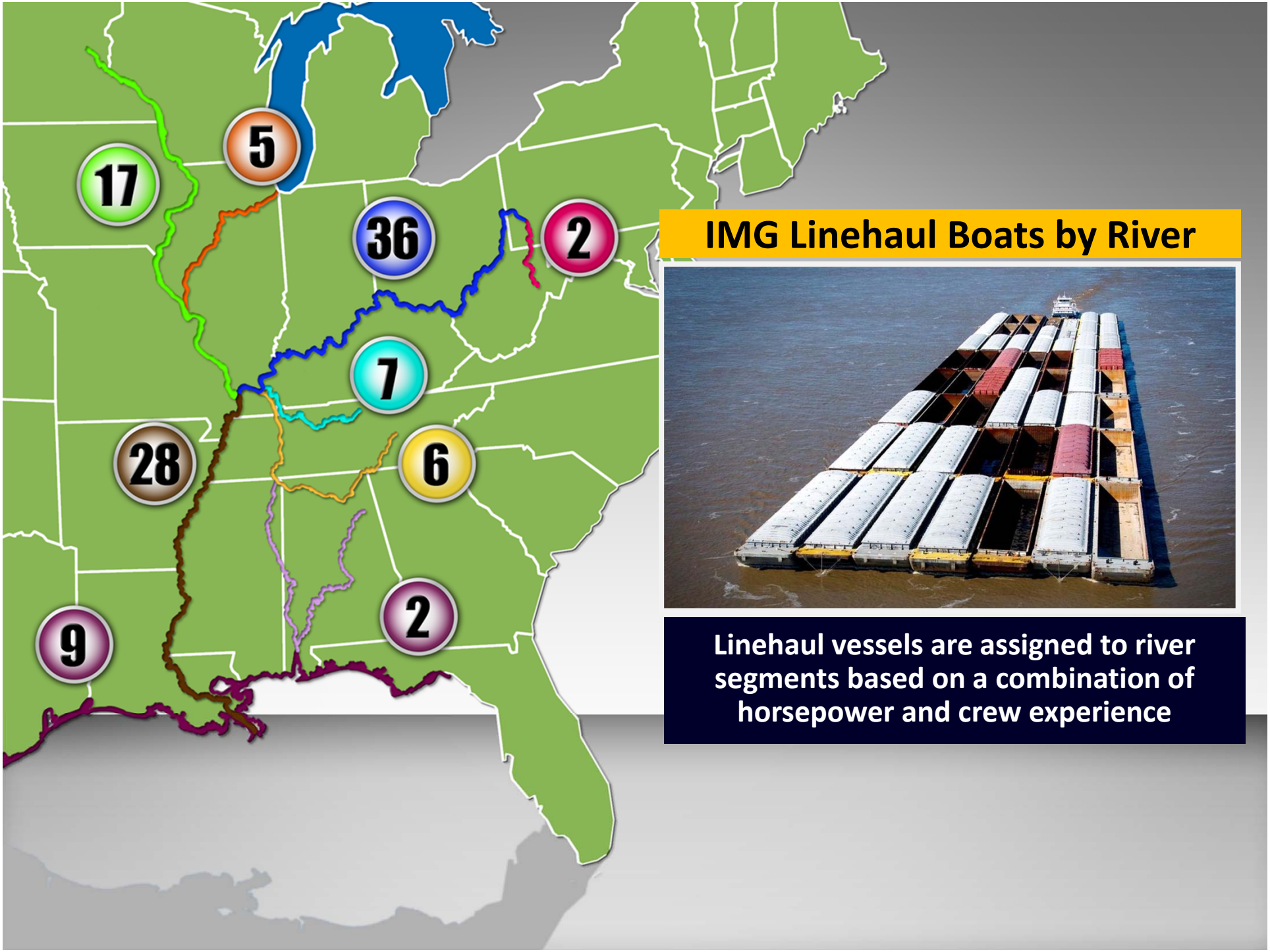
About 100 up to 10500HP

About 40 up to 1800HP



Ingram has locations all along the inland waterways system


A Hub and Spoke Operation is possible given Ingram's size and allows network-wide service offerings
Linehaul Motor Vessel Deployment To/From Hubs
Hubs



IMG Linehaul Boats by River

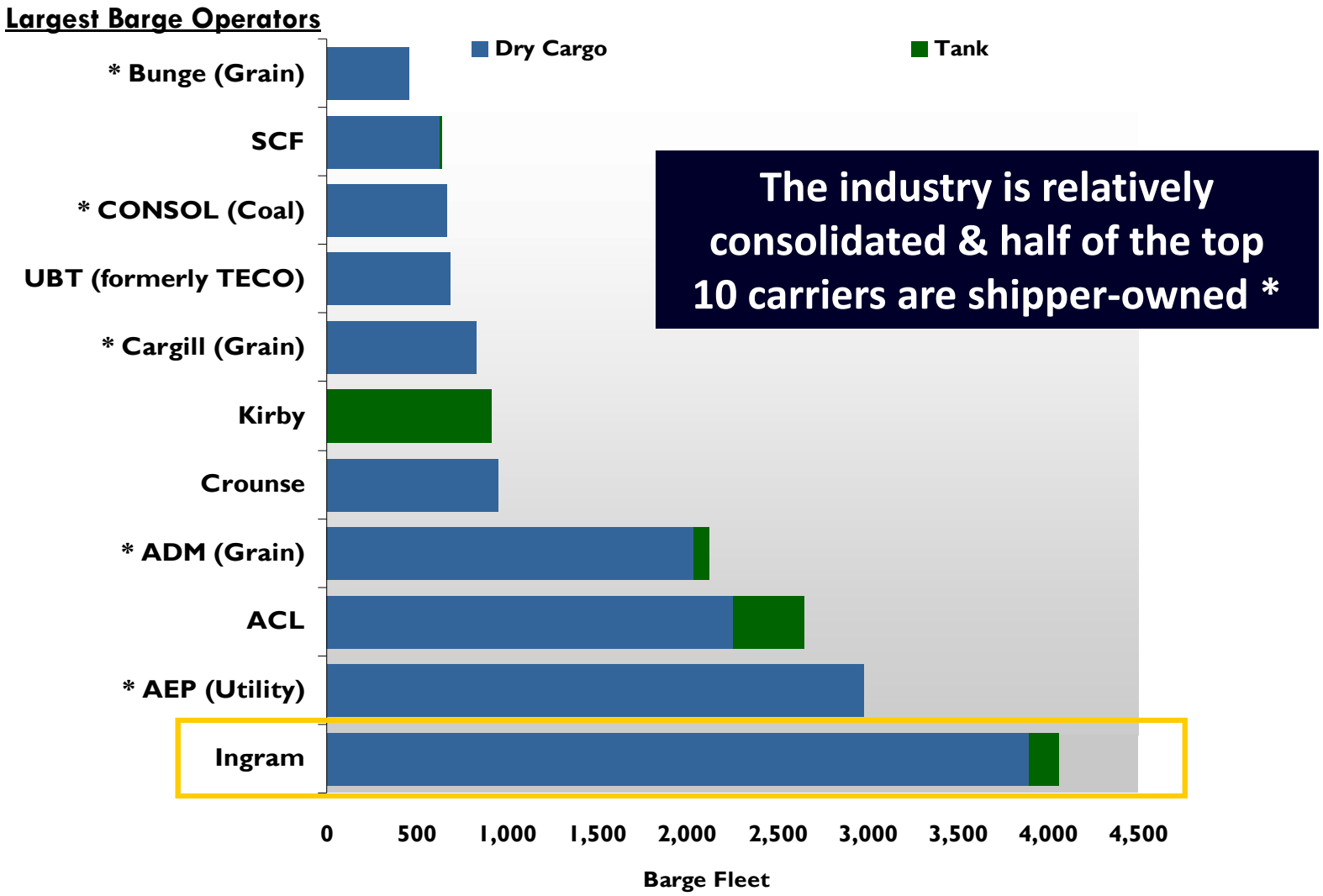
Linehaul vessels are assigned to river segments based on a combination of horsepower and crew experience

Largest dry cargo carrier; 4th largest liquid carrier

25 Years of Growth through Acquisitions

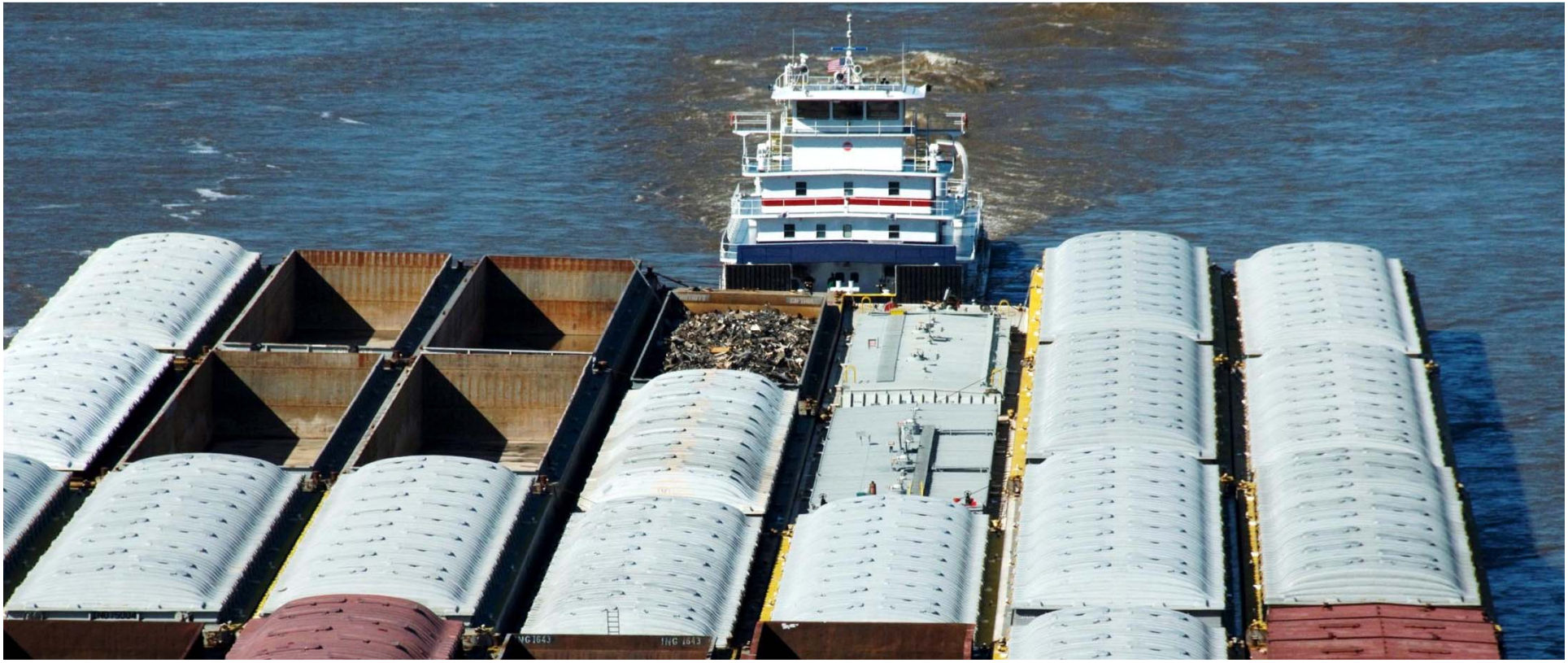
Year	Transaction With	Number of Barges
1984	Acquired Ohio Barge Line	516 barges, 15 boats
1988	Acquired American Barge and Towing	370 barges, 8 boats
1990	Ingram Fleet	1,153 barges, 47 boats
1995	Acquired M/G Transport	365 barges, 8 boats
1990 – 1995	New Construction	153 hopper barges
2002	Acquired Midland Enterprises	2,228 barges, 82 boats
1996 – 2002	New Construction	515 hopper barges
2005	Acquired Riverway	433 barges, 7 boats
2007 – 2010	New Construction	735 barges
2010	Acquired Barges from Ospraie	92 barges (hoppers and tanks)
2011	New Construction	112 barges
2012	Acquired Boats from ACBL	7 boats
2012	Acquired Tank Barges from James Marine	7 tank barges
2012	Acquired U.S. United Barge Line, LLC	633 barges, 17 boats
1984 – 2012	*Total New Construction and Acquisitions*	*~4,416 barges, 191 boats*

Strategic Situation: Competitors



Commodities We Carry

Dry Cargo Tons



57% TONS Energy-Related

Coal, Coke, Other

9% TONS

Agriculture-Related

Grain, Fertilizer

18% TONS Metals-Related

Alloys, Iron, Steel, Ores, Scrap

8%
TONS

Construction-Related

Cement Products, Stone

3% TONS Other

Salt, Wood, Miscellaneous

Competitive Advantage Comes From Large Flotillas

Linehaul towboats are assigned to operating territories to achieve the lowest possible unit towing cost

Lower Mississippi Operations

Locking River Operations

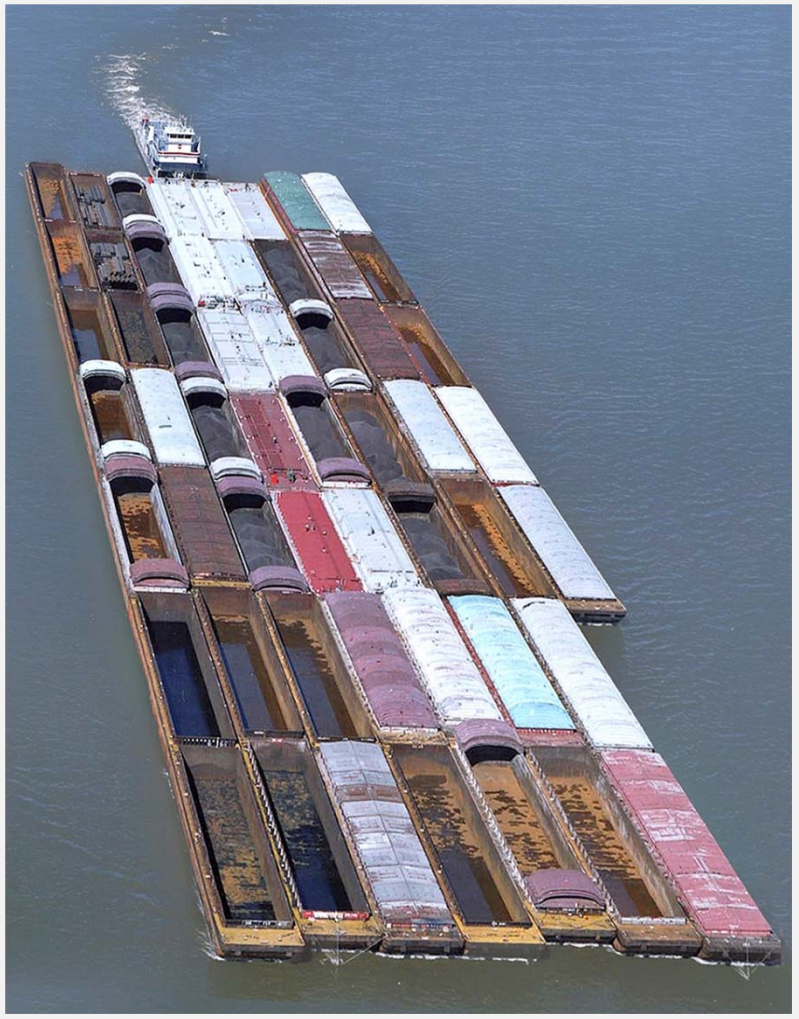
Canal Operations


The Lower Mississippi is an open river with no lock structures, allowing larger tows moving more than 80,000 tons

1,250'
Empire State

1,454'
Willis Tower
(formerly Sears Tower)

1,568'
Lower Mississippi Tow Length



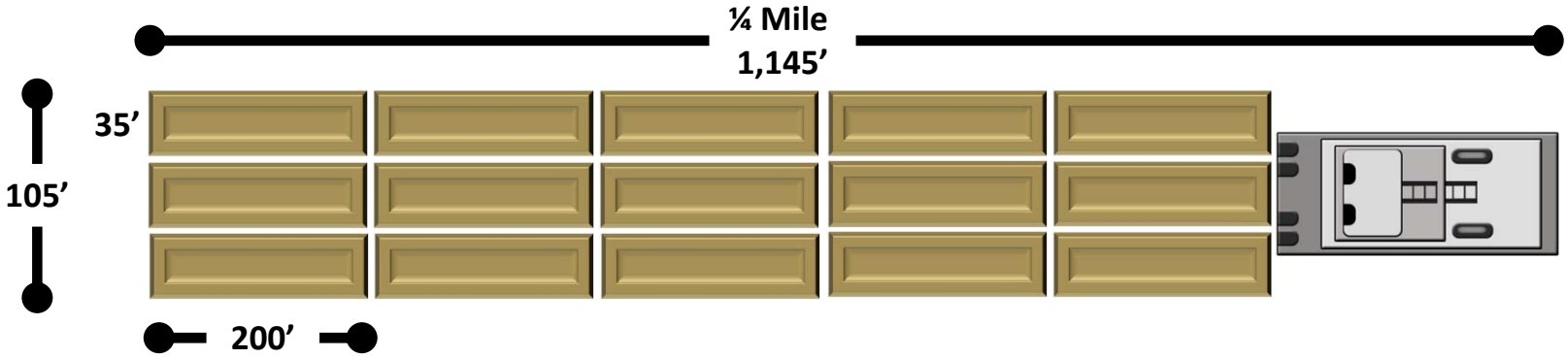
Today's Inland Waterway System

- Nearly 12,000 Miles 9ft & Over
- 198 lock sites / 241 chambers
- Operated by Army Corps of Engineers
- System is mature; but available capacity to support traffic growth

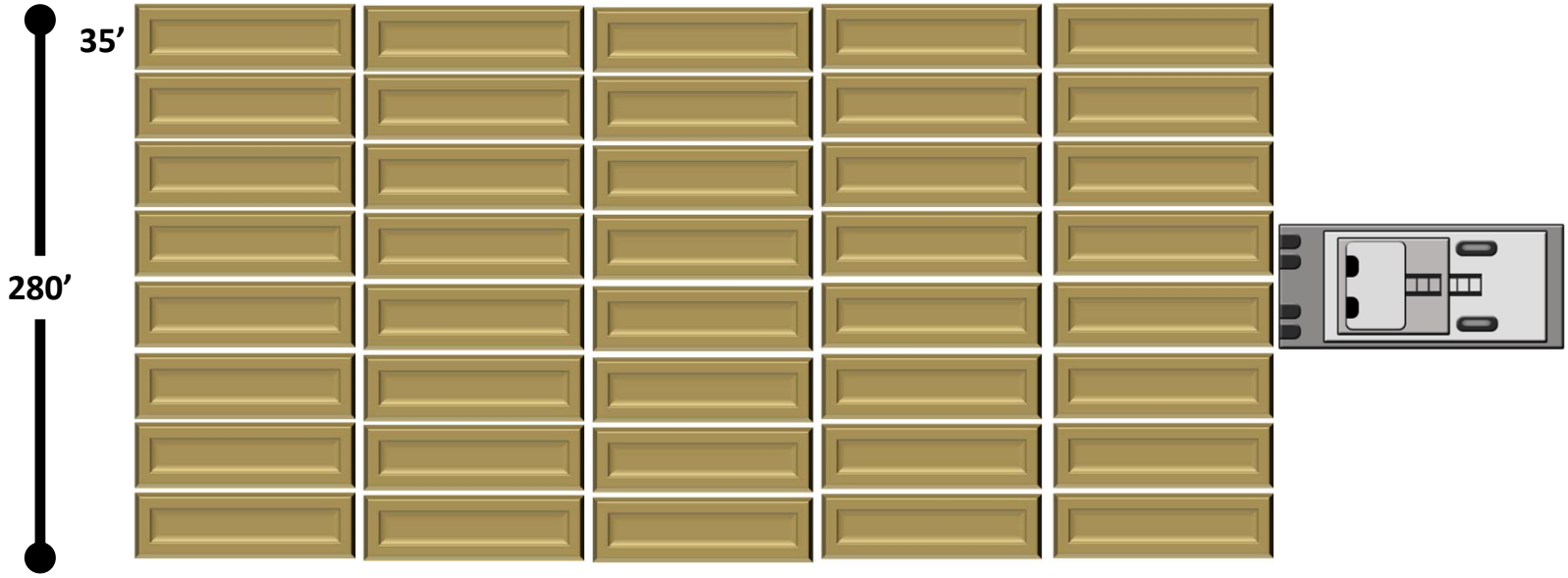
Lock & Dam Sites
Areas of Congestion

Maximum Tow Sizes

Above St Louis, Illinois. Ohio, Tennessee

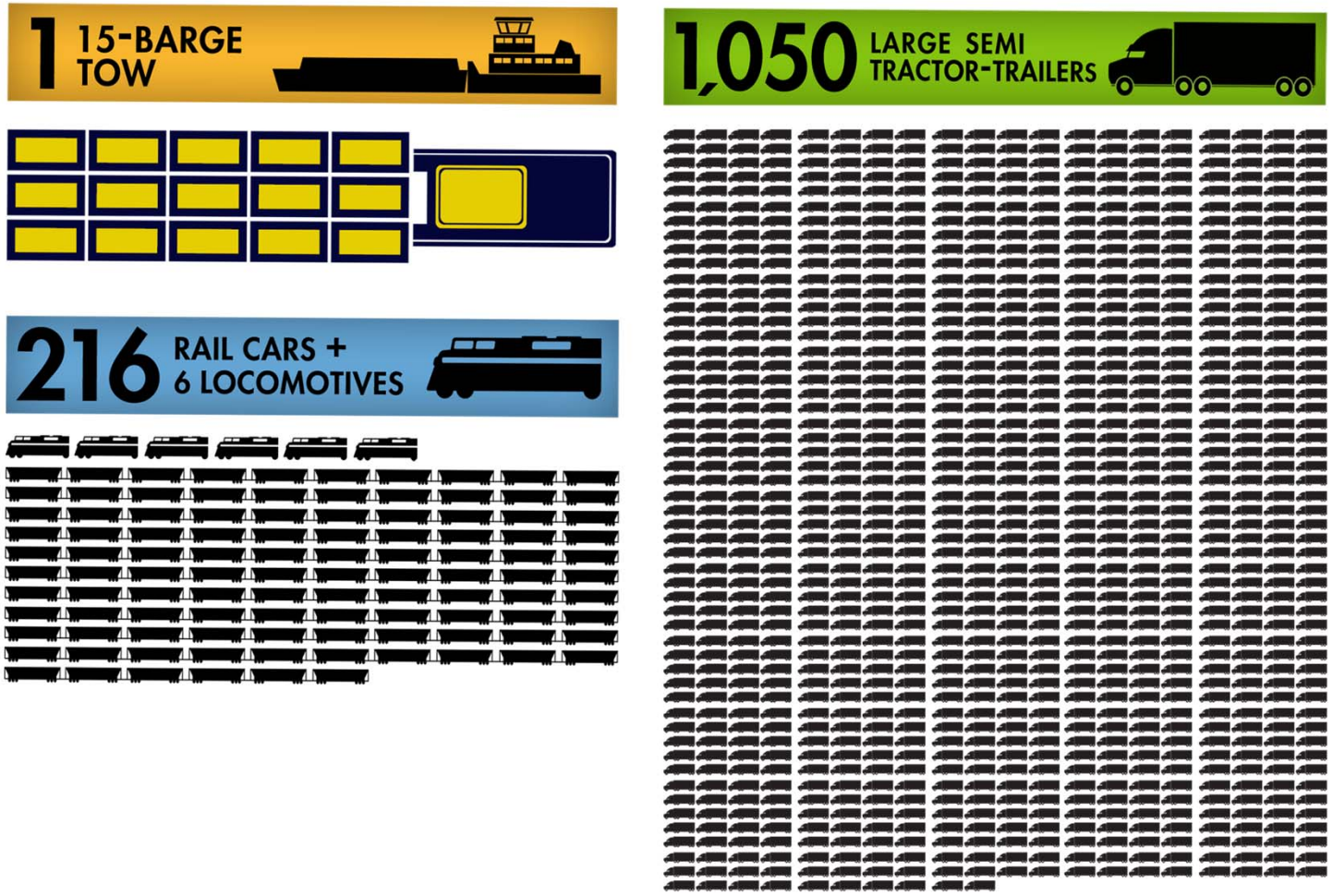


Below Cairo, IL To New Orleans



Locks Are a Critical Component

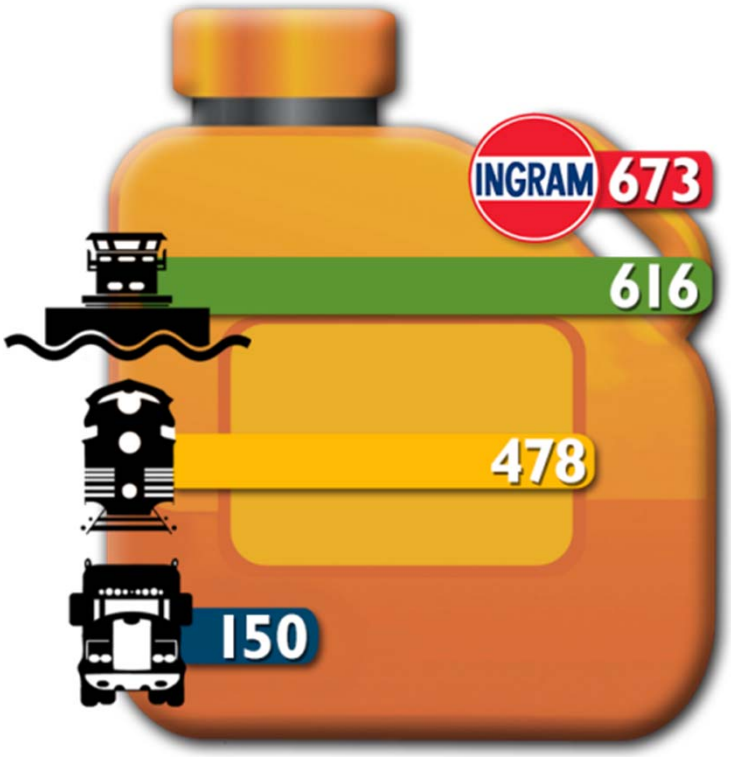
Advantages of Inland Barge Transportation



NATIONAL WATERWAYS FOUNDATION

Advantages of Inland Barge Transportation

Transporting freight by water is also the most energy-efficient choice



Ton-miles Traveled per Gallon of Fuel

For one ton of cargo per gallon of fuel…

- A barge moves **616 miles**
- A rail car moves **478 miles**
- A truck moves **150 miles**

NATIONAL WATERWAYS FOUNDATION

Advantages of Inland Barge Transportation

Inland waterways transport generates fewer emissions than rail or truck per ton-mile.

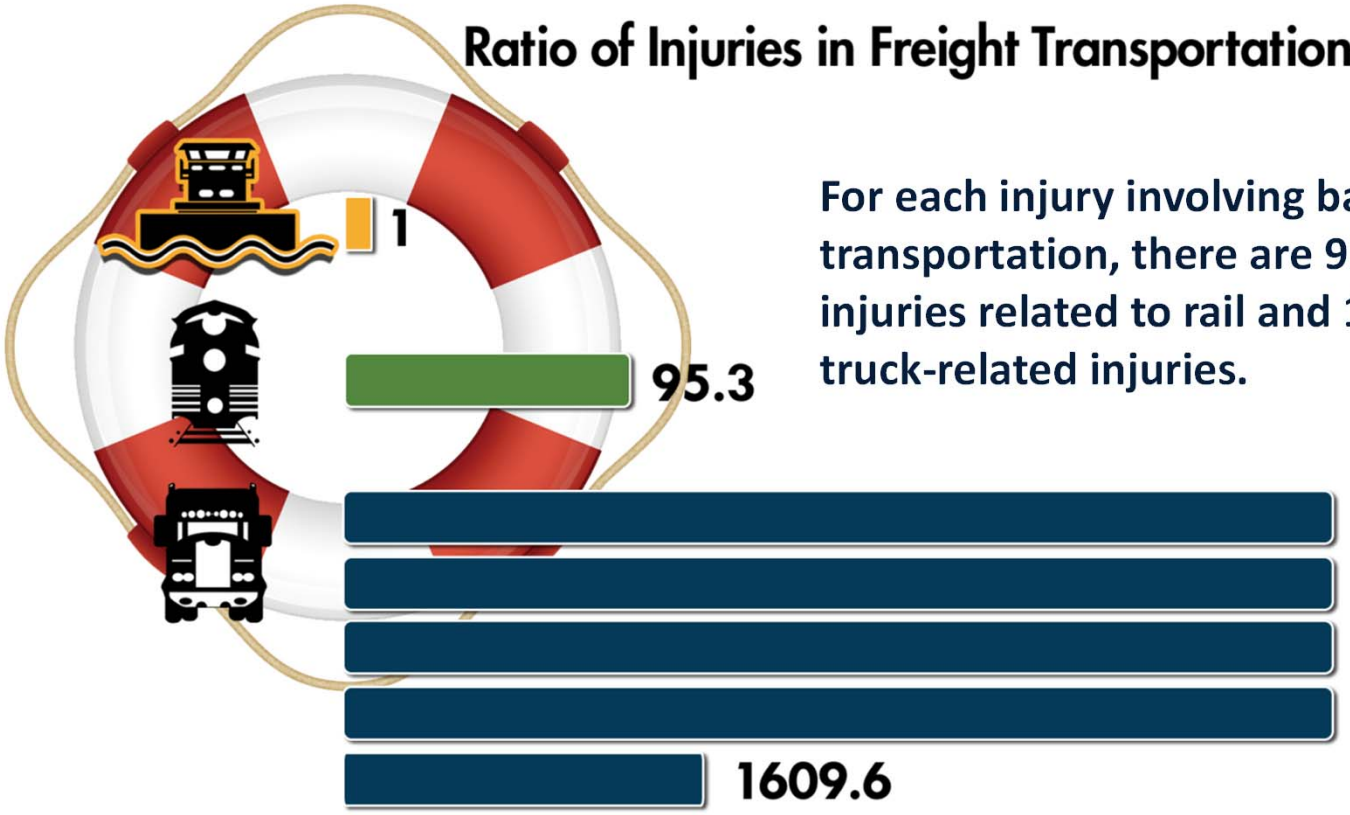
Barge transportation generates the lowest emissions as measured in grams per ton-miles in four standards tracked by the EPA:

- **PARTICULATE MATTER (PM)**
- **HYDROCARBONS (HC)**
- **CARBON MONOXIDE (CO)**
- **NITROGEN OXIDES (NO_x)**

NATIONAL WATERWAYS FOUNDATION

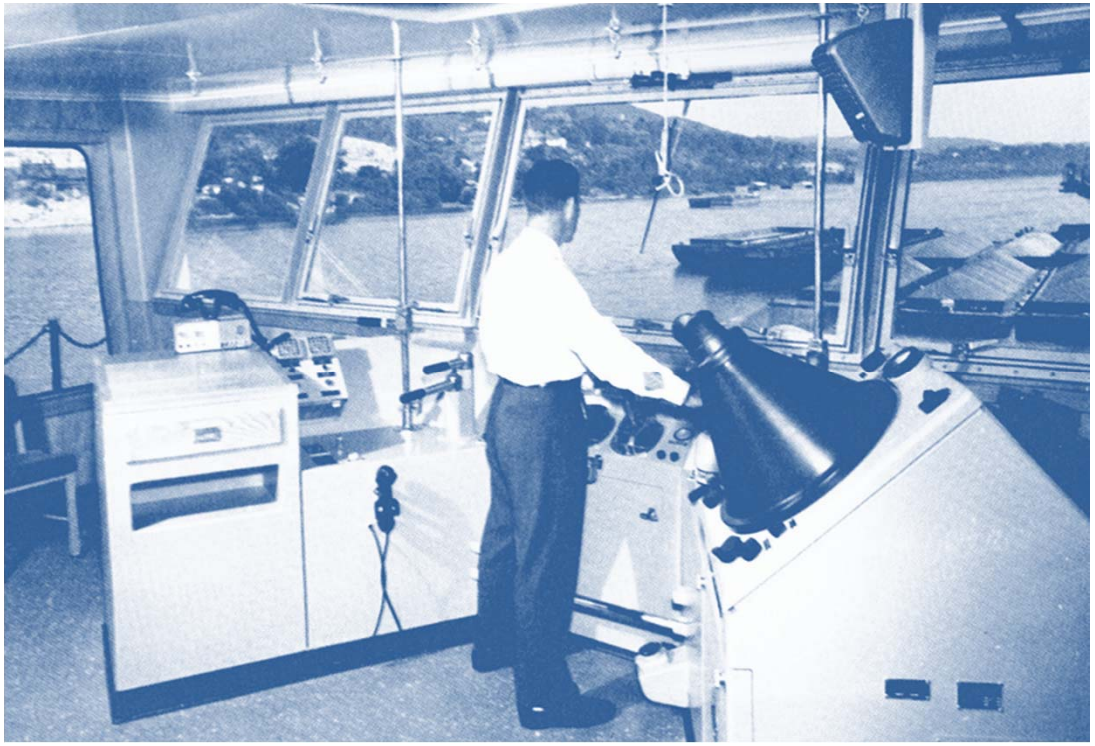
Advantages of Inland Barge Transportation

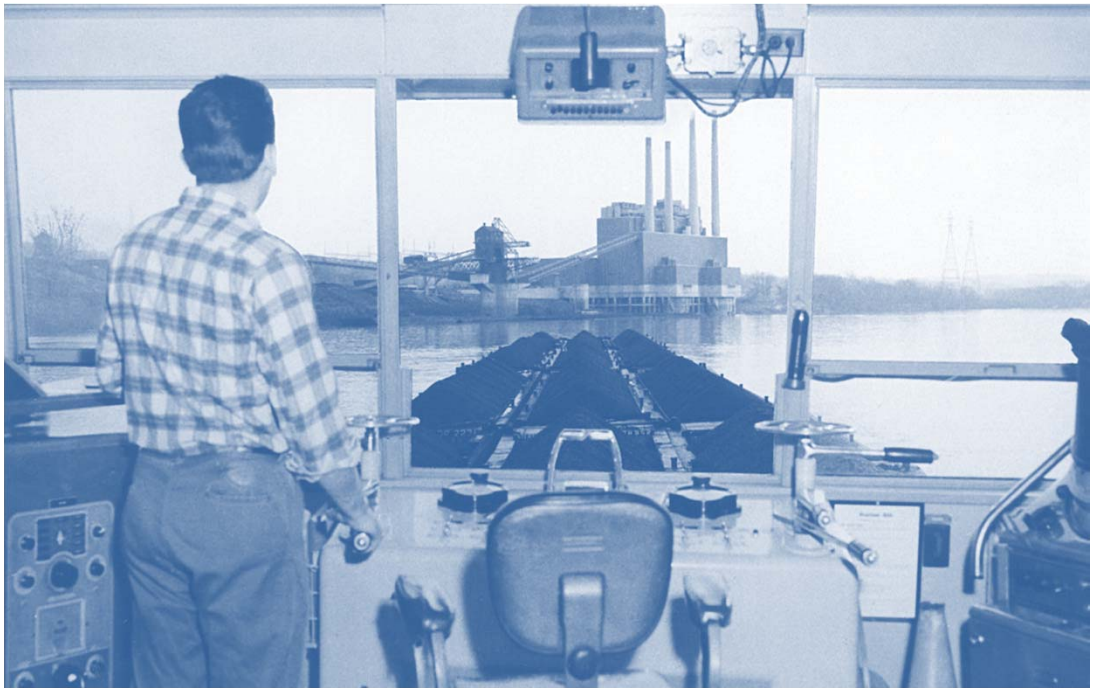
Inland waterways transport has a low injury record compared to rail or truck



For each injury involving barge transportation, there are 95.3 injuries related to rail and 1,609.6 truck-related injuries.

NATIONAL WATERWAYS FOUNDATION

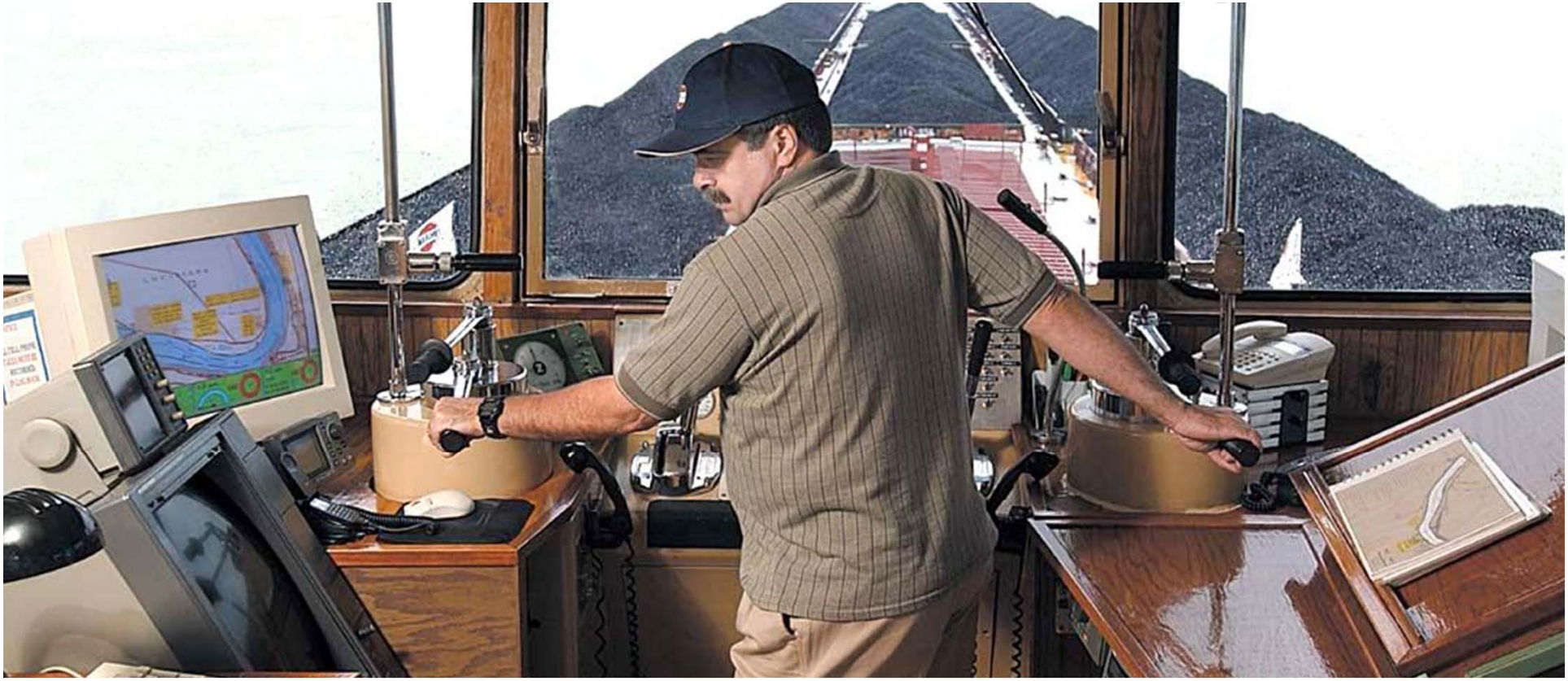




Reality of the 1970s

Delayed information flow to experienced, instinctive associates to drive performance and efficiencies.

- Single sideband radios for ship-to-shore communications
- Magnetic boards for visualization of the fleet
- Voluminous reports – 1000s of pages per day
- Modest system interactions – batched data in, out



Reality of the 1980s

Beginnings of logistics management with shore-side systems activities with modest automation of logistics and operational efficiencies

- Manual entry of position reports
- Electronic contracts and billing
- Accountability to customer for service times
- Maintenance and repair tracking

Midland Enterprises, Transportation Dept. Cincinnati, OH 1993

As recently as 1993, many in industry struggled with change

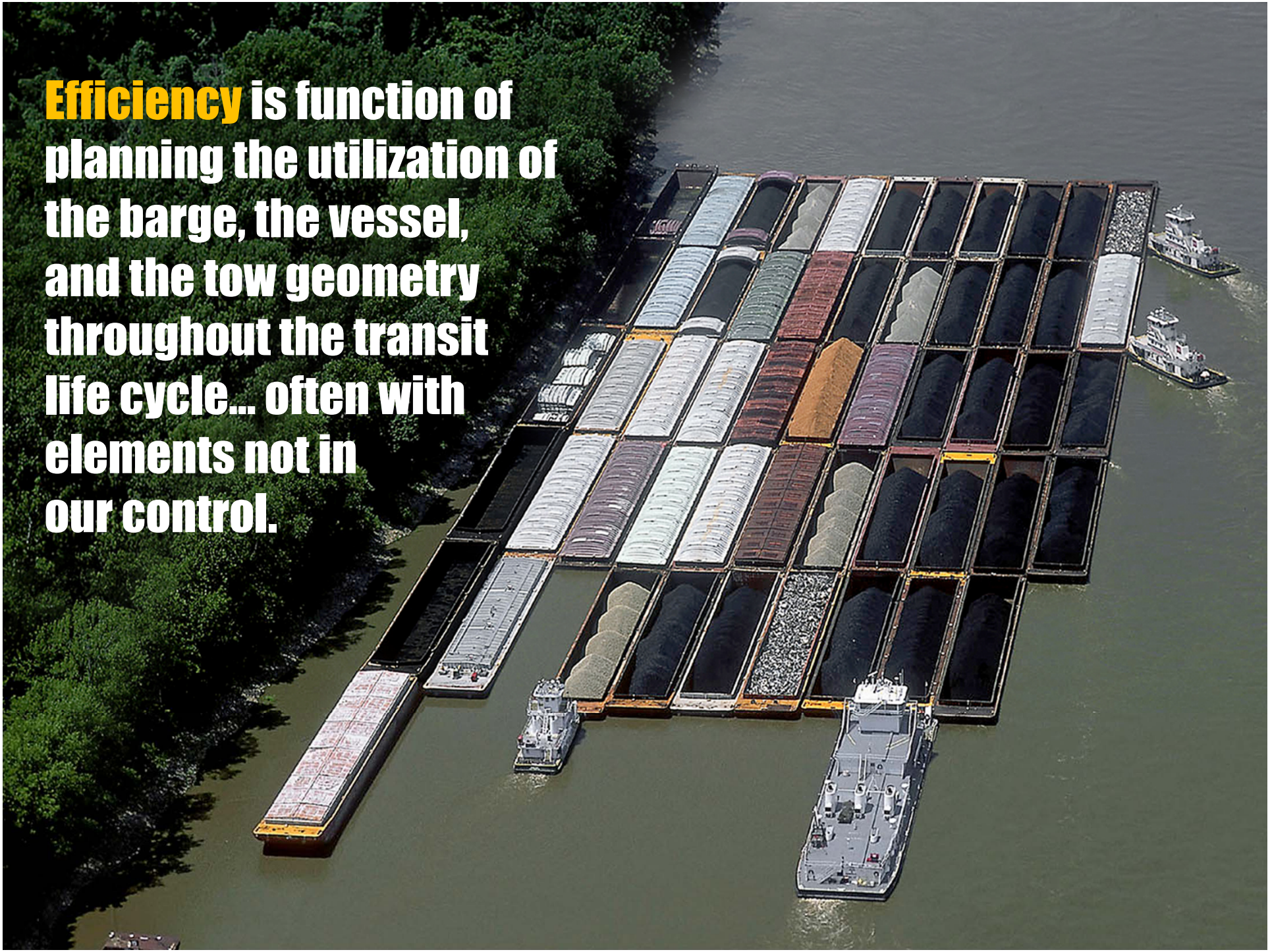
Magnetic boards clearly demonstrate an industry in need of fundamental change & innovation

Midland Enterprises, Transportation Dept. Cincinnati, OH 1993

Reality of the 1990s

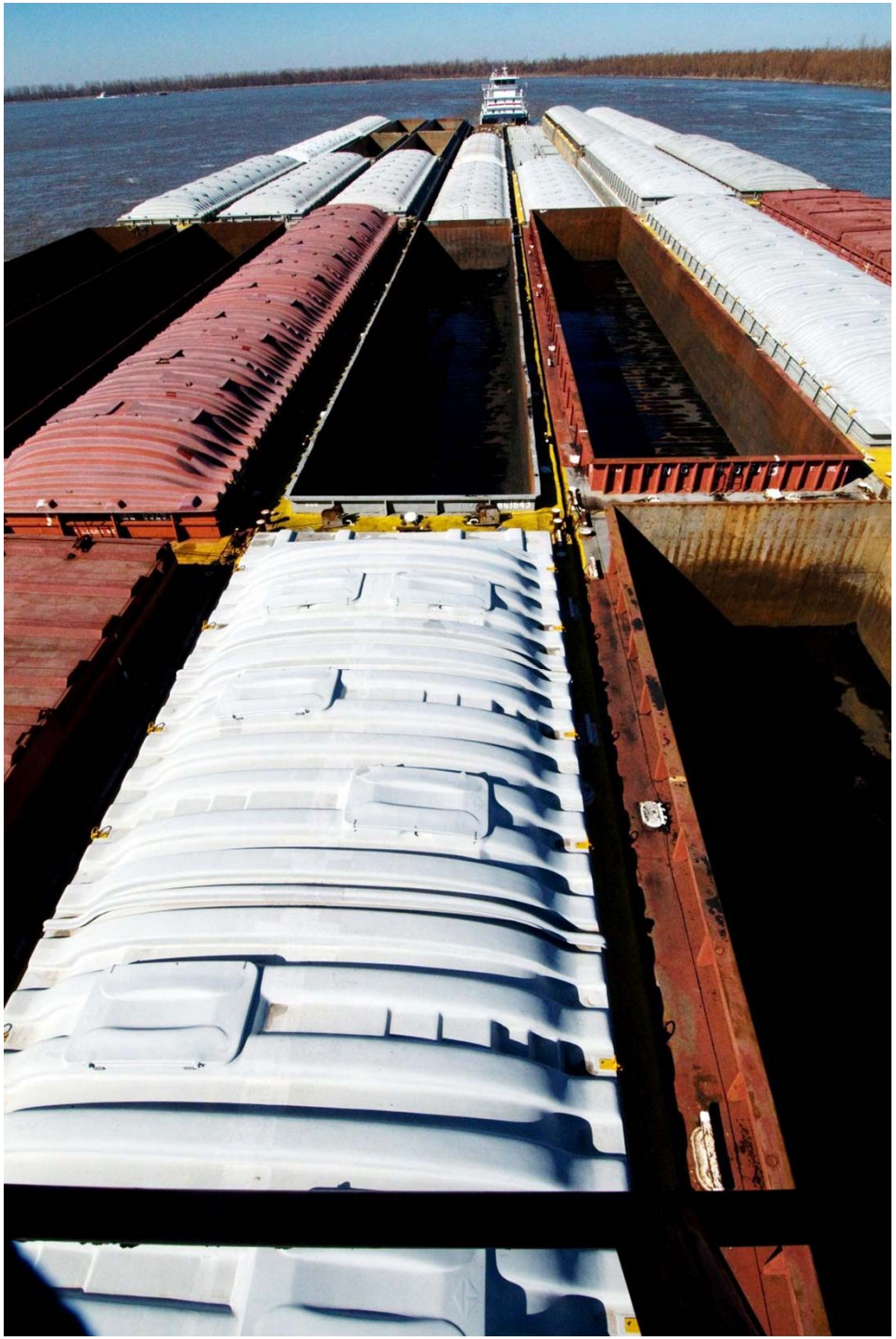
Beginnings of telecommunications revolution offering new opportunities for system deployments to fleet with shore-side (systemic) interactions

- First carrier with onboard computer systems for data capture
- Satellite-based technology to trickle data at a then astounding rate of ~100 characters per second vs. today's millions of characters per second via cellular
- Period of challenging results and internal focus on barge utilization


Efficiency is function of
planning the utilization of
the barge, the vessel,
and the tow geometry
throughout the transit
life cycle... often with
elements not in
our control.


Elements within our control:
• Barge Selection
• Tow Planning
• Tow Building
• Execution
• Delivery

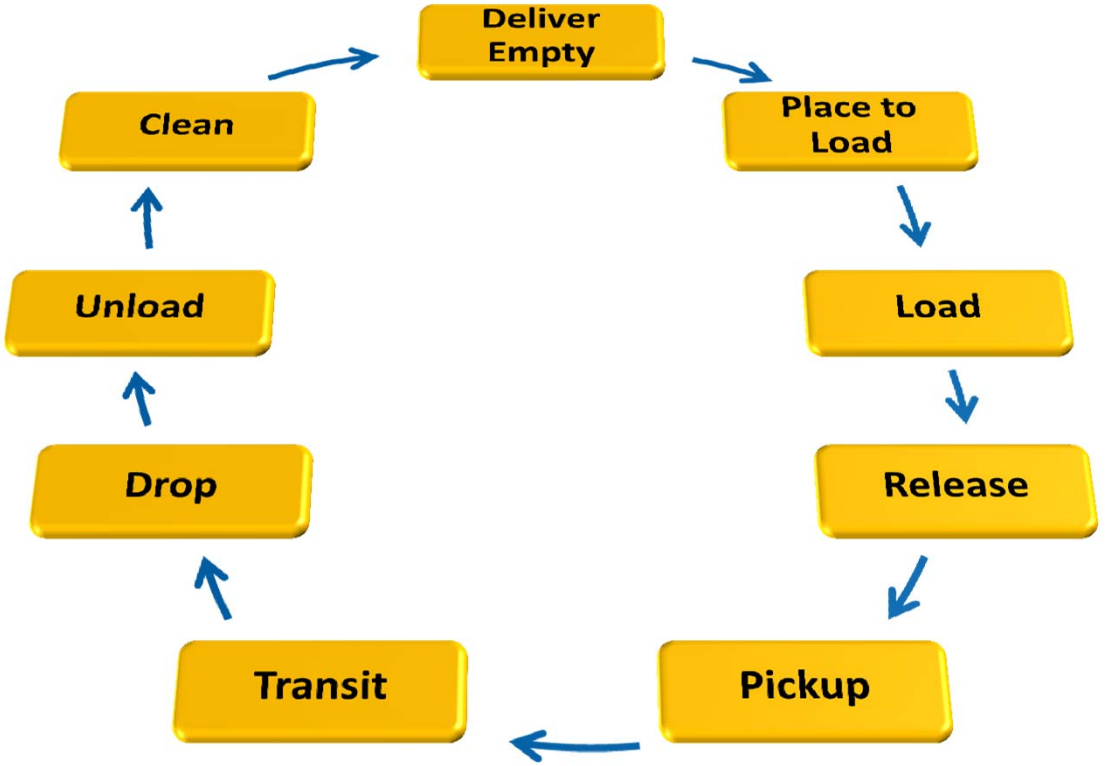
Each barge has very unique loading and transit characteristics that must be considered on a per customer and per trip basis



- Proximity of empty to next load
- Type of cargo
- Barge Nomination Process

Dry Barge (Covered)	Box Rake
Dry Barge (Open)	Box Rake
Liquid	Chemical Caustic

A typical barge cycle consists of many interactions and unique processes, all of which can affect performance and customer service



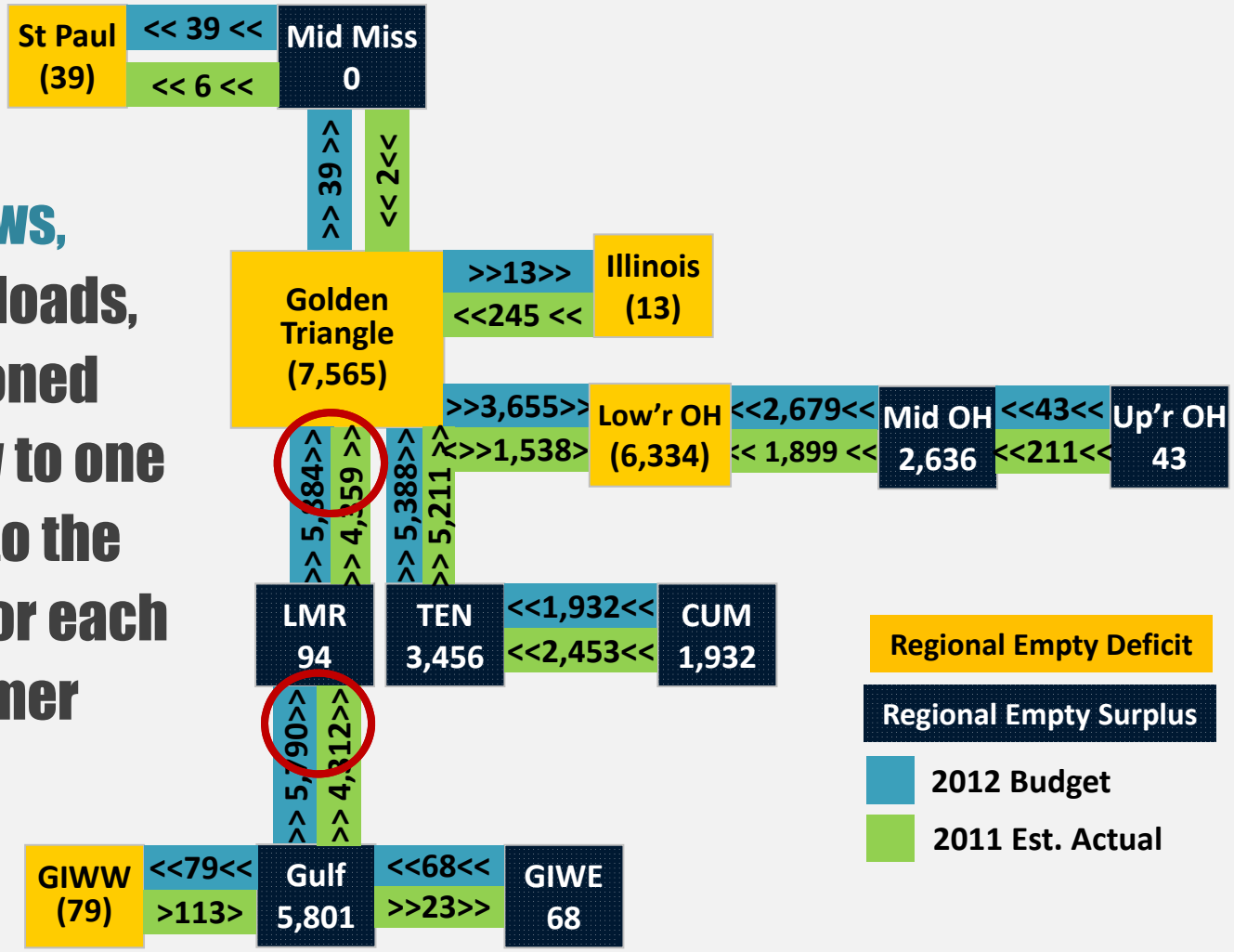
Advanced Barge Scheduling system [ABS c. 1997] was developed to actualize the barge as the “controllable” unit of production

Advanced Barge Scheduling system [ABS c. 1997] was developed to actualize the barge as the "controllable" unit of production

ABS had many philosophical goals:

- Positive assignment of specific barge to customer order
- Assign barge to next order
- Assumed customer orders to be disciplined and uniform
- "Variations" of barge cycles don't matter

The balance of flows,
both empties and loads, was to be transitioned from a macro view to one that drilled down to the individual barge for each contract by customer



Theory:

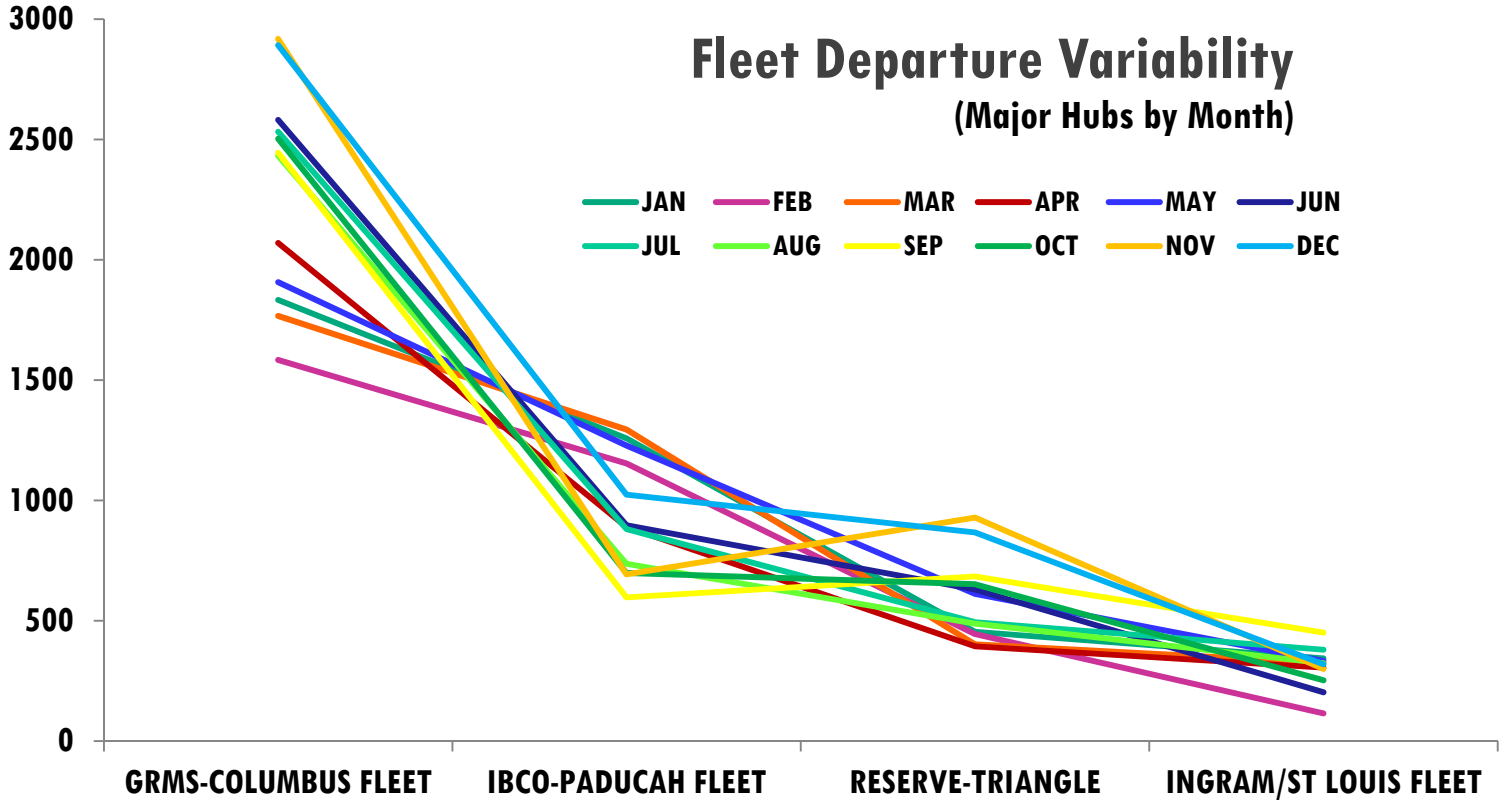
The utilization of the fleet would significantly improve, similar to that of airlines and rail through network wide optimization and linear forecasts

False Assumptions:

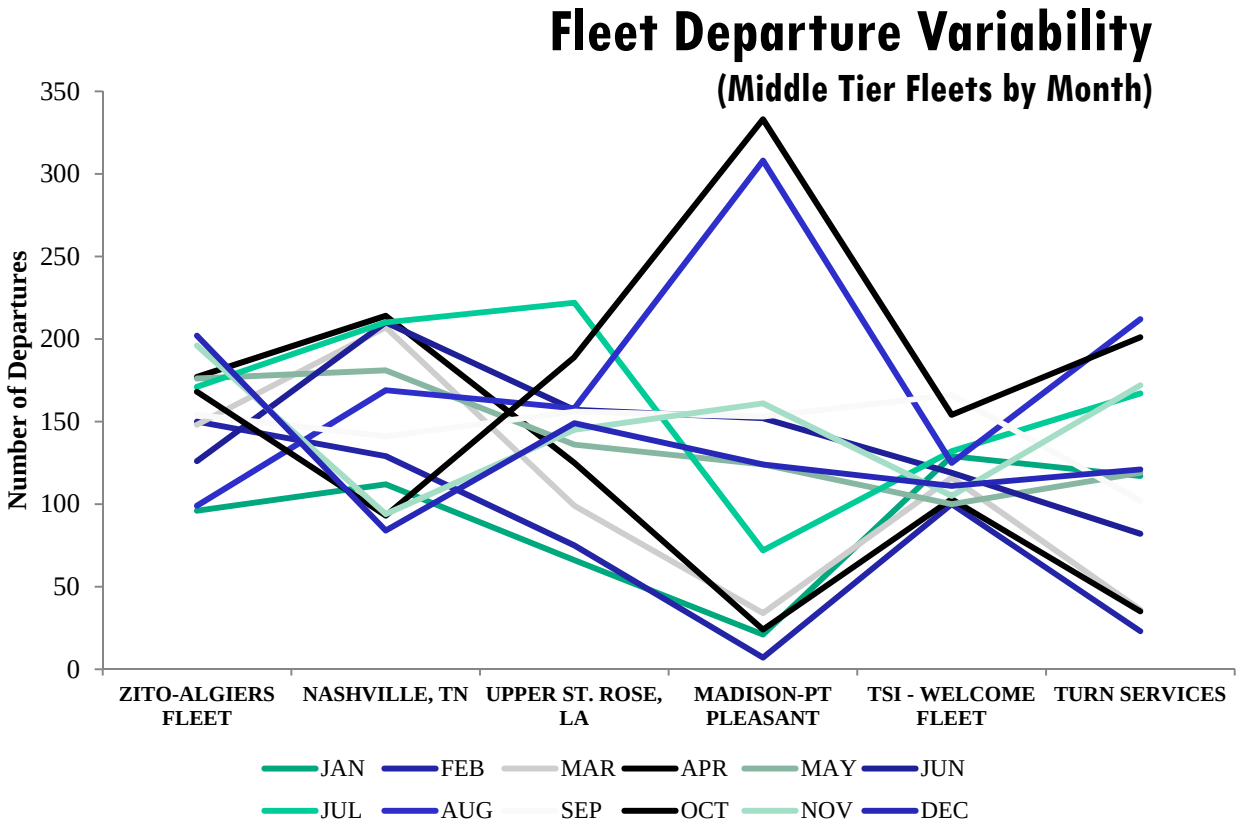
- Schedules are predictable
- Transit times are predictable (in most all cases)
- Uniform vessel availability for next trip
- The “event” is the only information required, not the anticipation of causal factors for that event


Barge Variability Creates
Challenges for Optimization
ING1764
ING1764
ING1764
ING 1946
ING 2137
13FTHULL

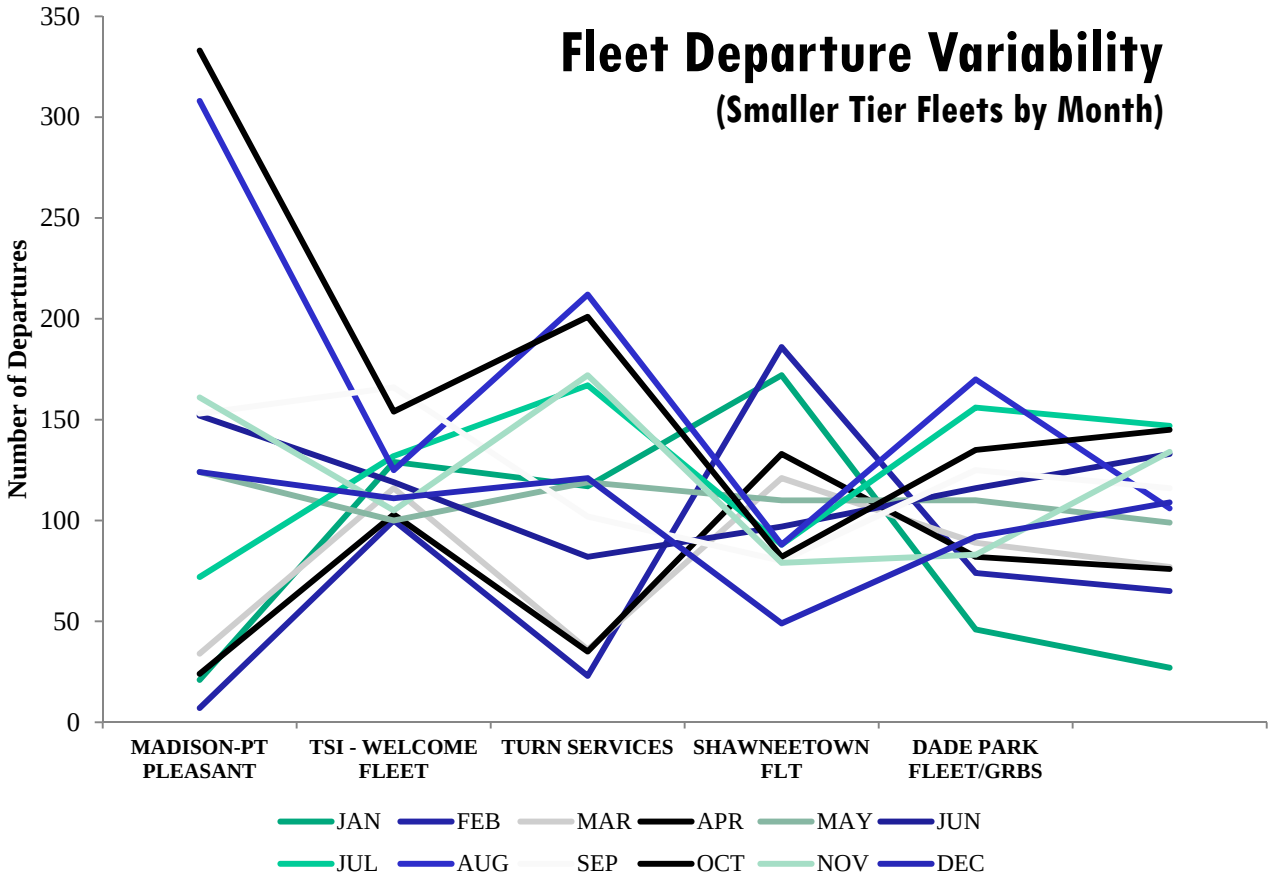
Barge Departure Varies from Major Hubs



Barge Departure Varies from Major Fleets

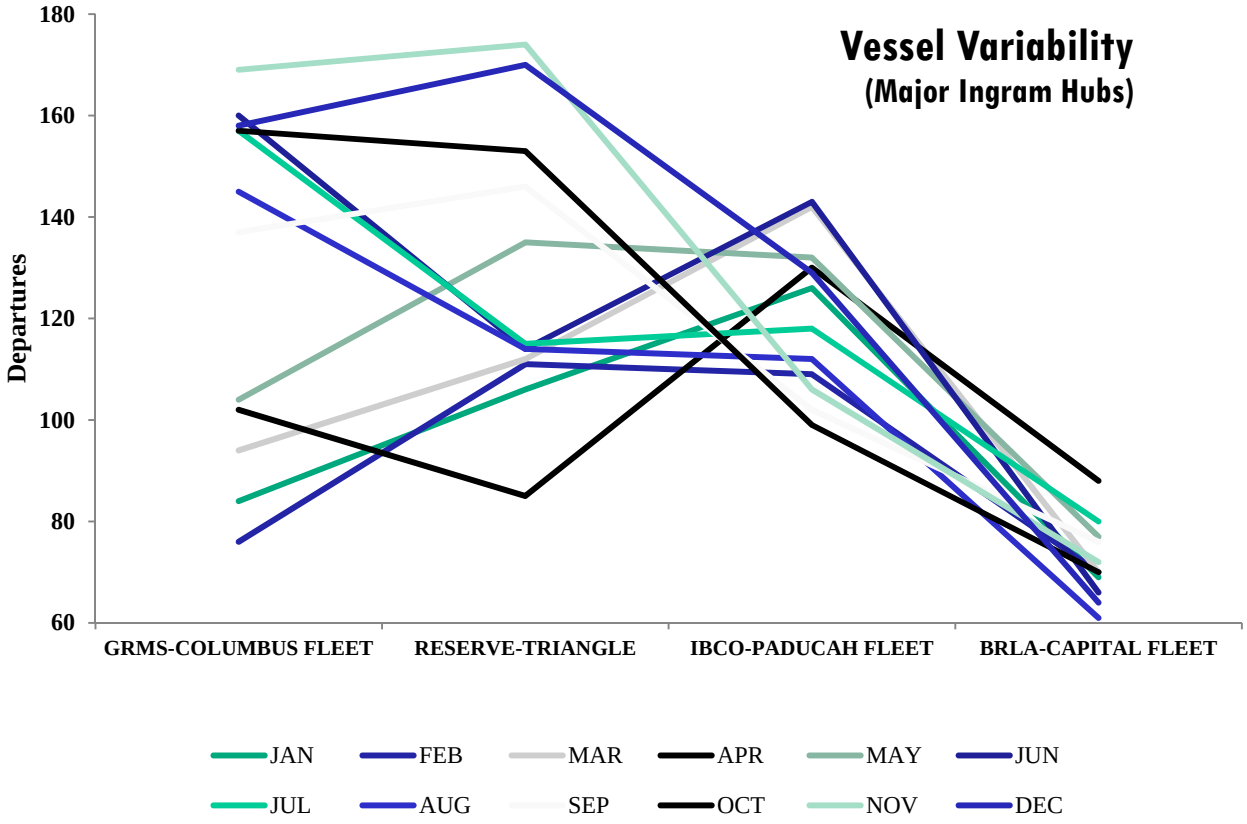


Barge Departure Varies from Smaller Fleets

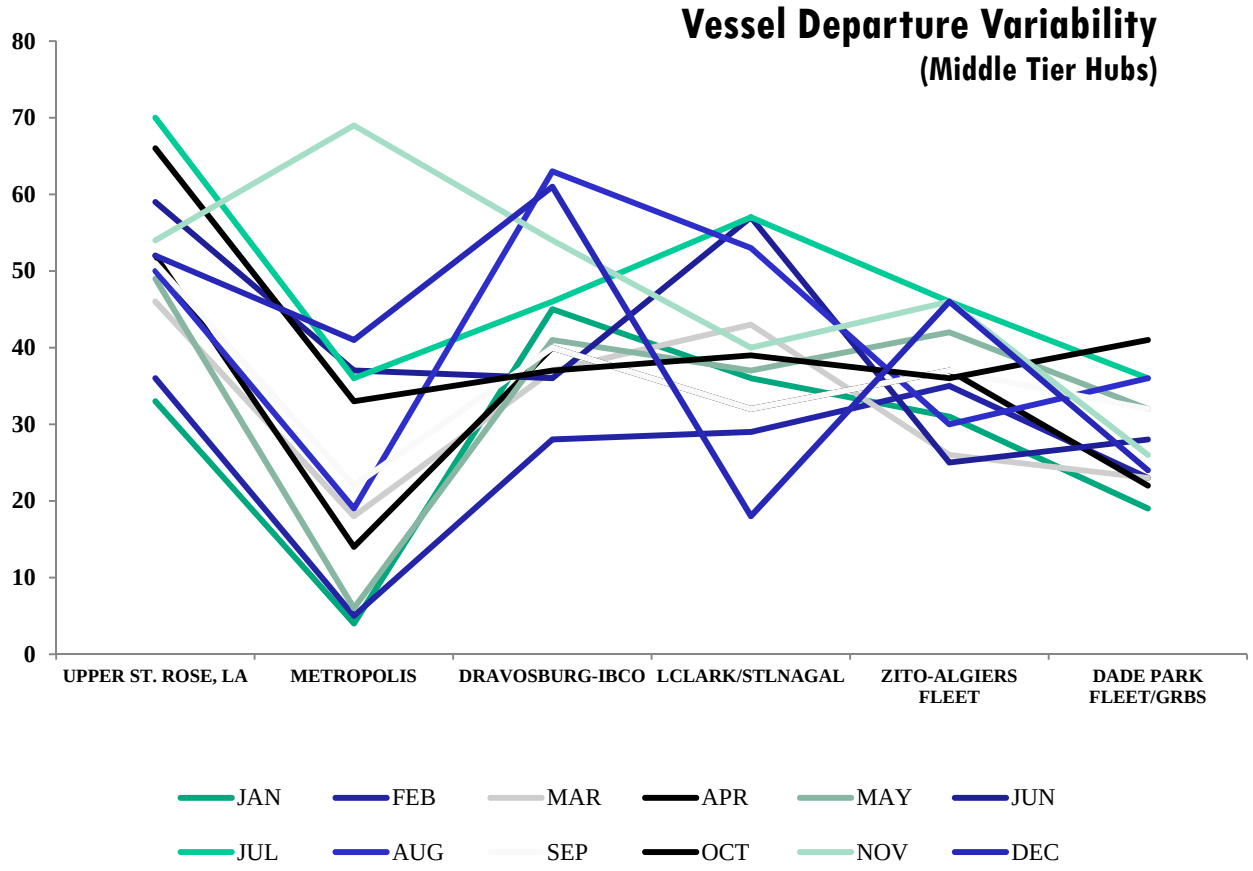


Vessel Variability
Also Creates Challenges for Optimization

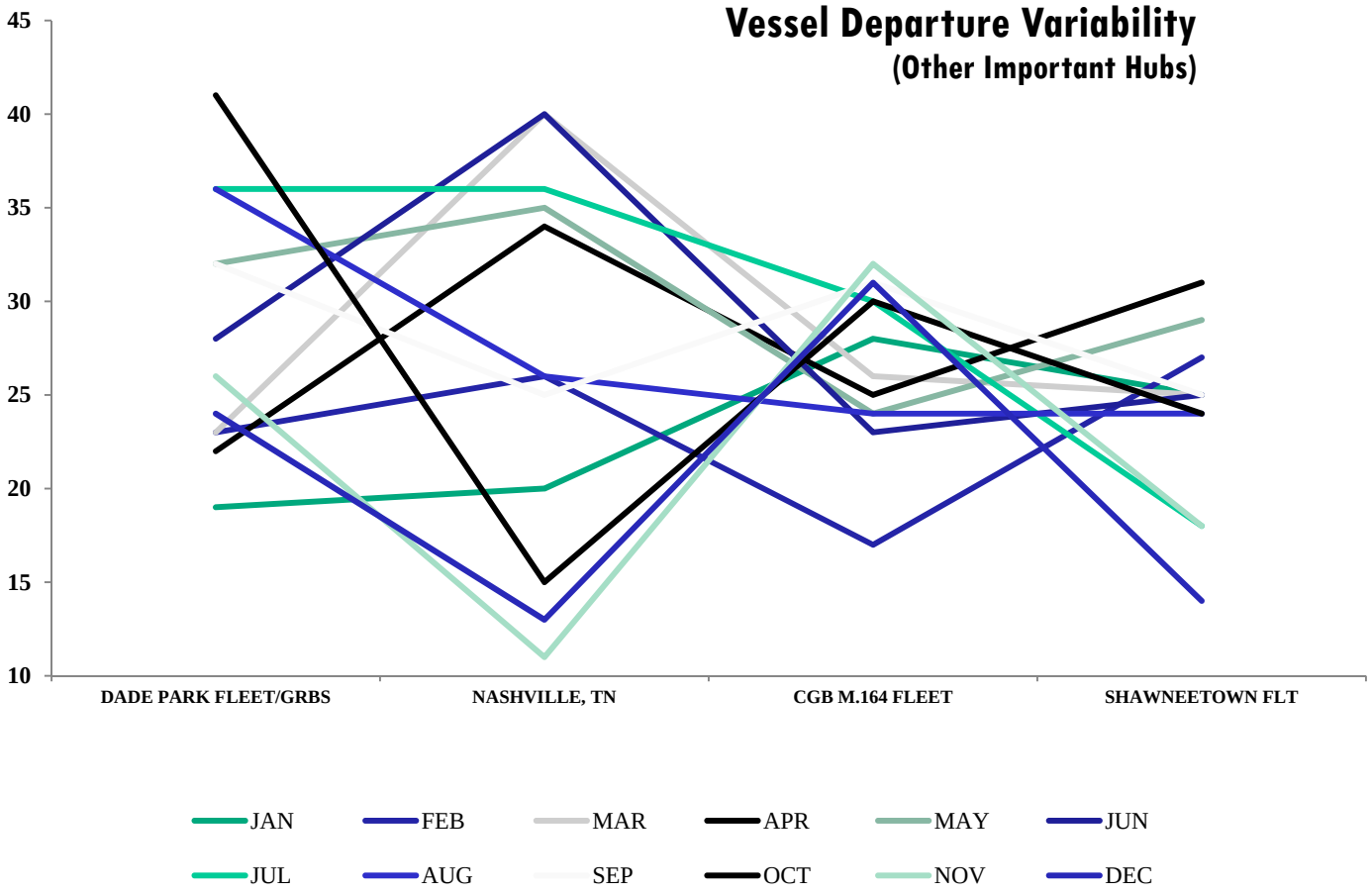
Vessel Departure Variability
from Major Hubs



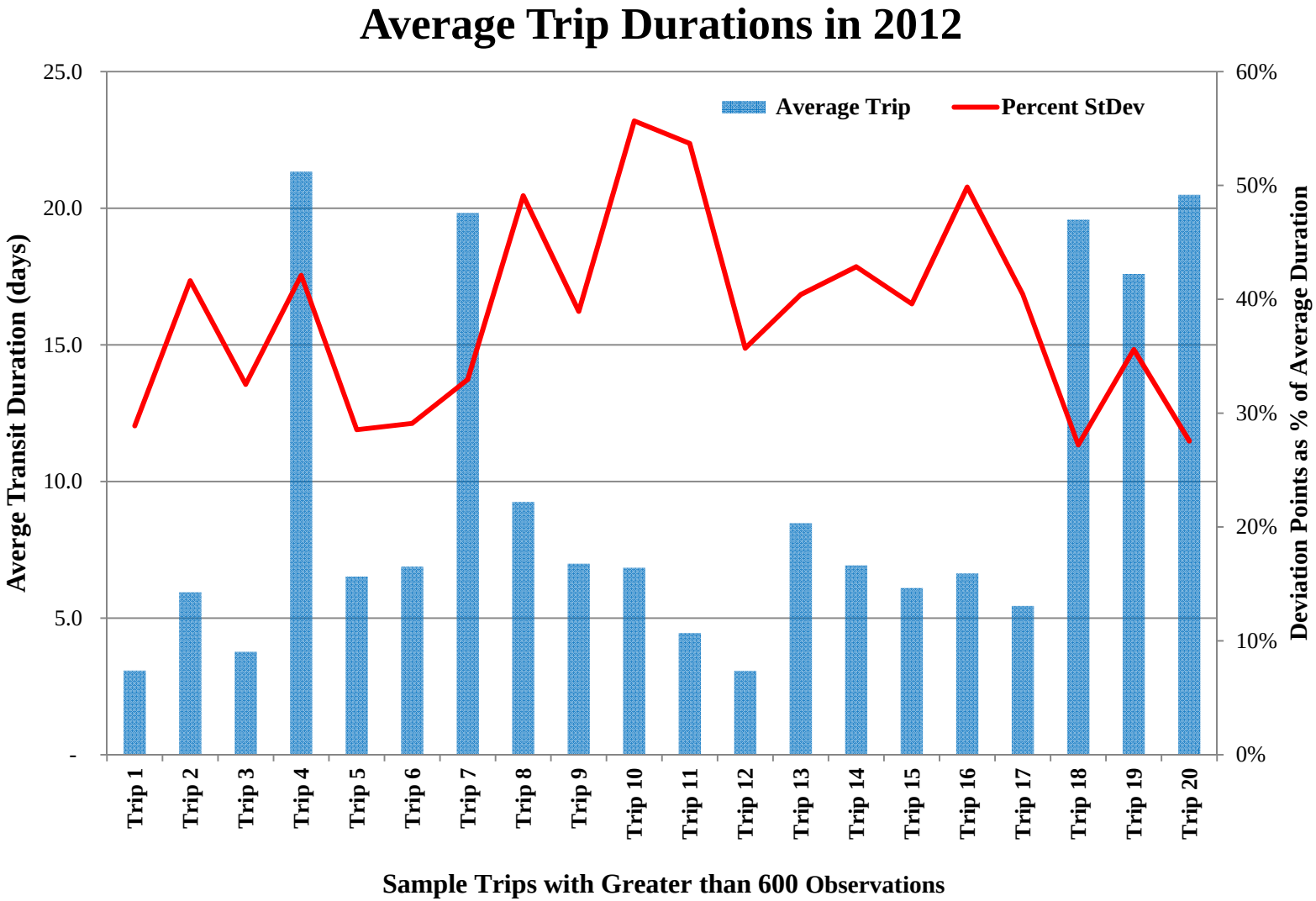
Vessel Departure Variability
from Major Hubs



Vessel Departure Variability
from Major Hubs



Trip Duration Varies Significantly




What went wrong?

ABS challenged the organization with near real-time summary info, with specific point-in-time dependencies, complex user interactions, and customer portals.

ABS challenged the organization with near real-time summary info, with specific point-in-time dependencies, complex user interactions, and customer portals.

- Slow user adoption
- Summary level (once a day) reports from the vessels
- Diverse skill levels for accurate entry and sequencing of data
- Used different technology platform(s)

Our unit of sale –

the barge is heterogeneous vs. homogeneous

Rakes or Box, hull depth

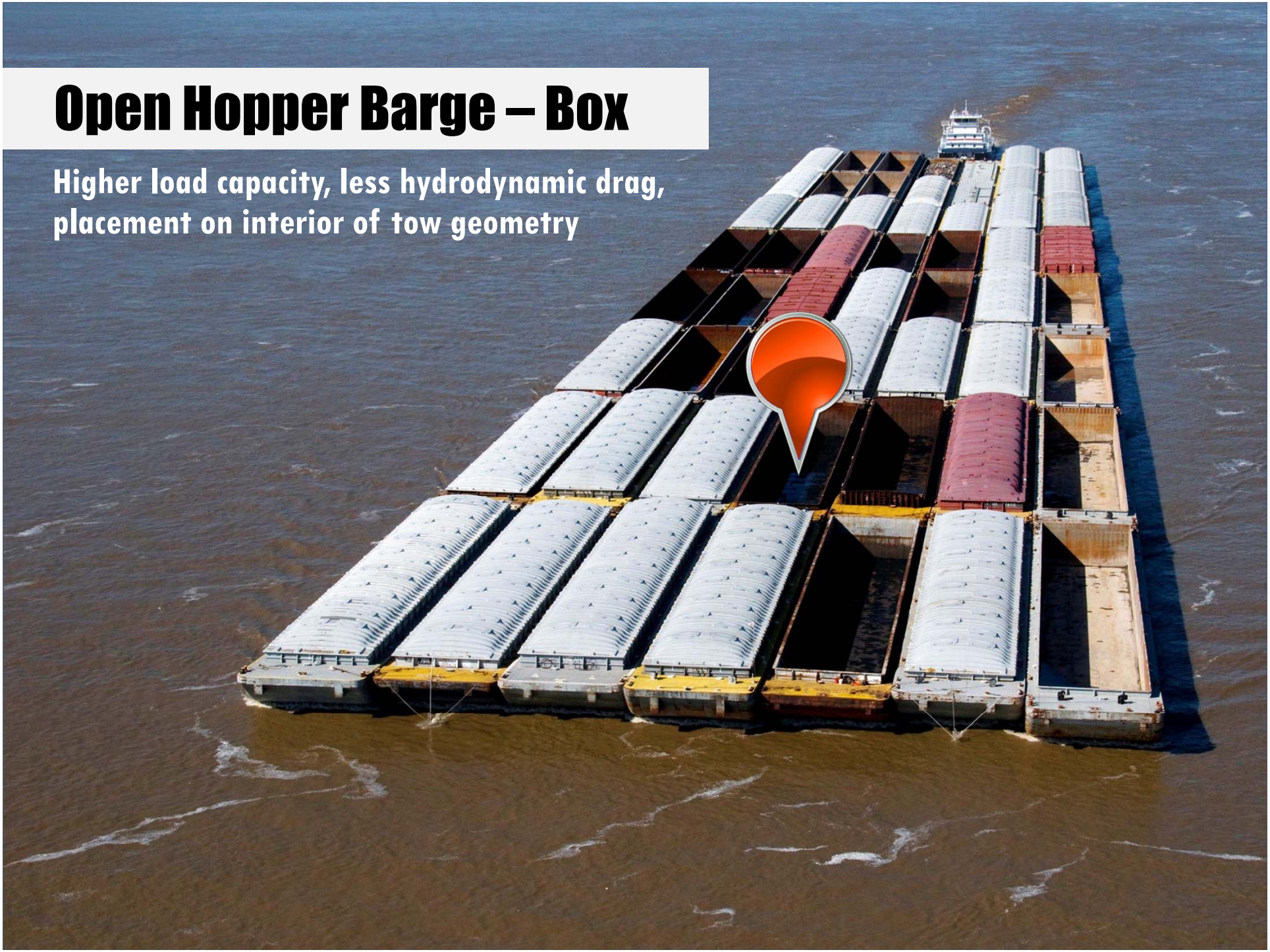
Channel issues, lock issues, congestion

River depth/stage throughout the trip

Each characteristic is important to match decision for load

Open Hopper Barge – Box

Higher load capacity, less hydrodynamic drag, placement on interior of tow geometry

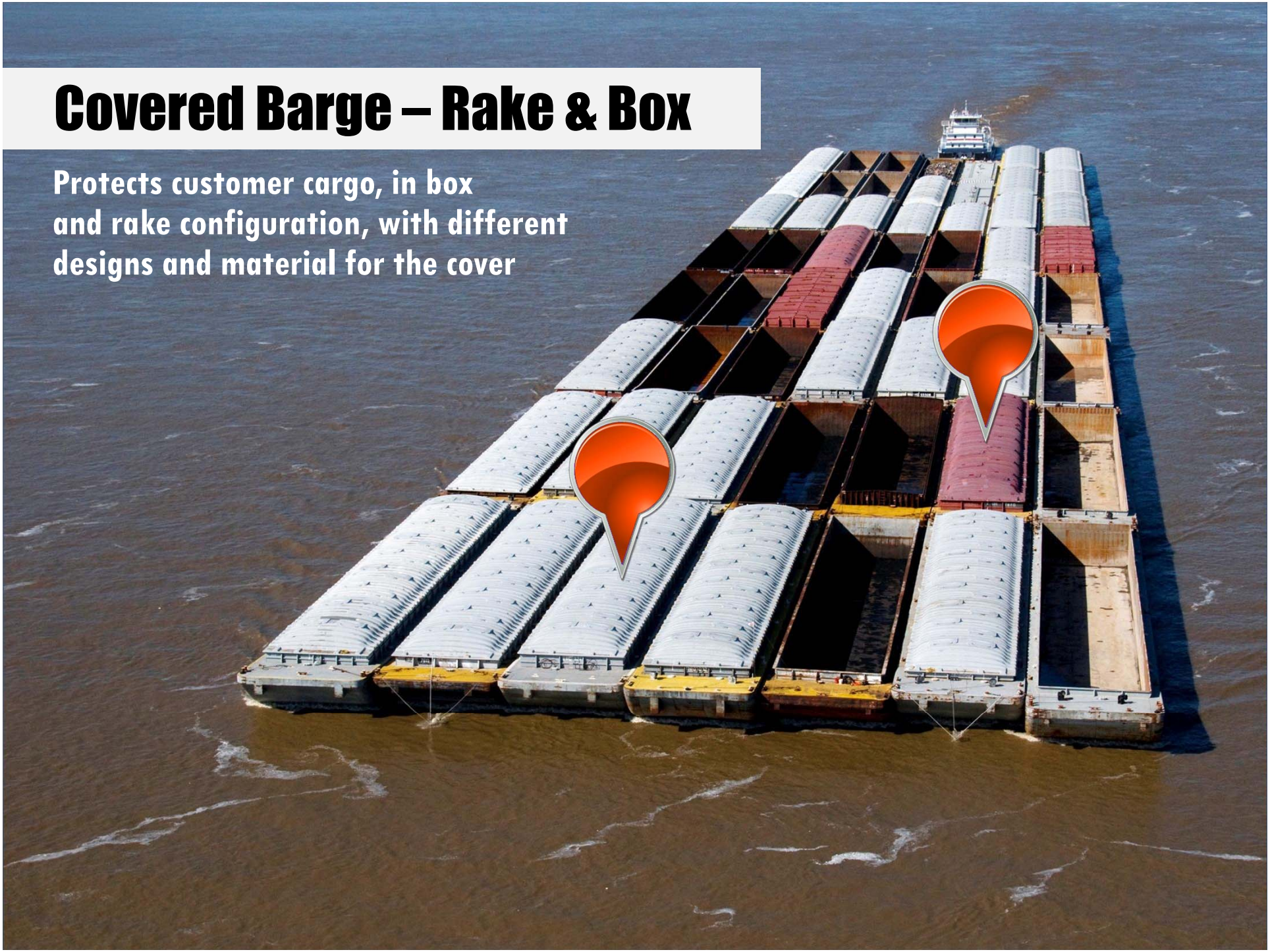


Open Hopper Barge – Rake

Minimizes hydrodynamic drag on tow and vessel, lower capacity, nearly always on the front of the tow

Covered Barge – Rake & Box

Protects customer cargo, in box and rake configuration, with different designs and material for the cover



Liquid Barge

For caustic and chemical trades, some cargo types require heater coils or vapor recovery equipment

Safety imperative requires liquid barge placement in the interior portion of tow, if possible

What else went wrong?

What else went wrong?

We operate in an unpredictable, unforecastable universe of systems

CHANNEL ISSUES

LOCK ISSUES

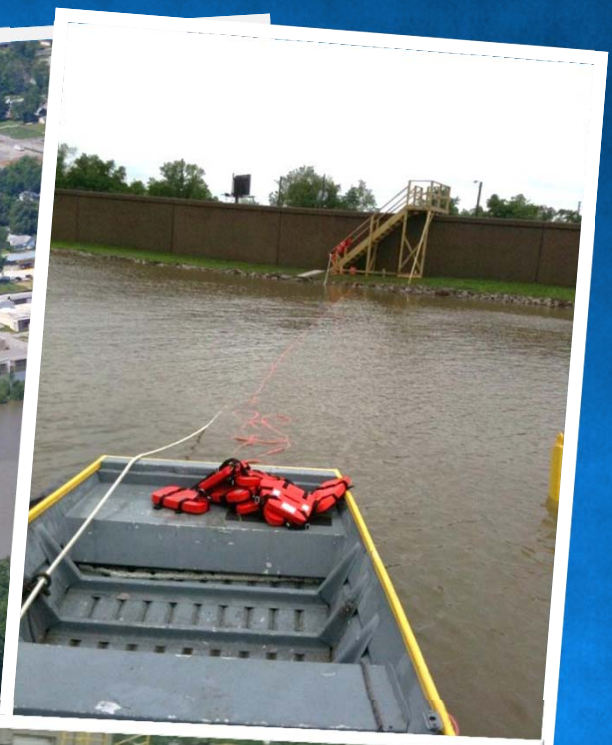
CONGESTION

ENVIRONMENTAL VOLATILITY

EXTREME EVENTS


Realities of Our Operations
Mother Nature and our infrastructure challenge our ability to remain nimble and serve our customers, all while operating with Zero Harm to our associates and our environment

The floods of 2011 created extreme operating conditions throughout the inland system rarely experienced



Ingram's Paducah, KY Office and Landing

Ingram's Columbus, KY Fleeting facility, adjacent to Birds Point Floodway

Columbus Fleet Aerial

– – – DEPICTS NORMAL SHORELINE

Flooding in Cairo, IL before the Birds Point Levee Breach

Birds Point Levee Breach

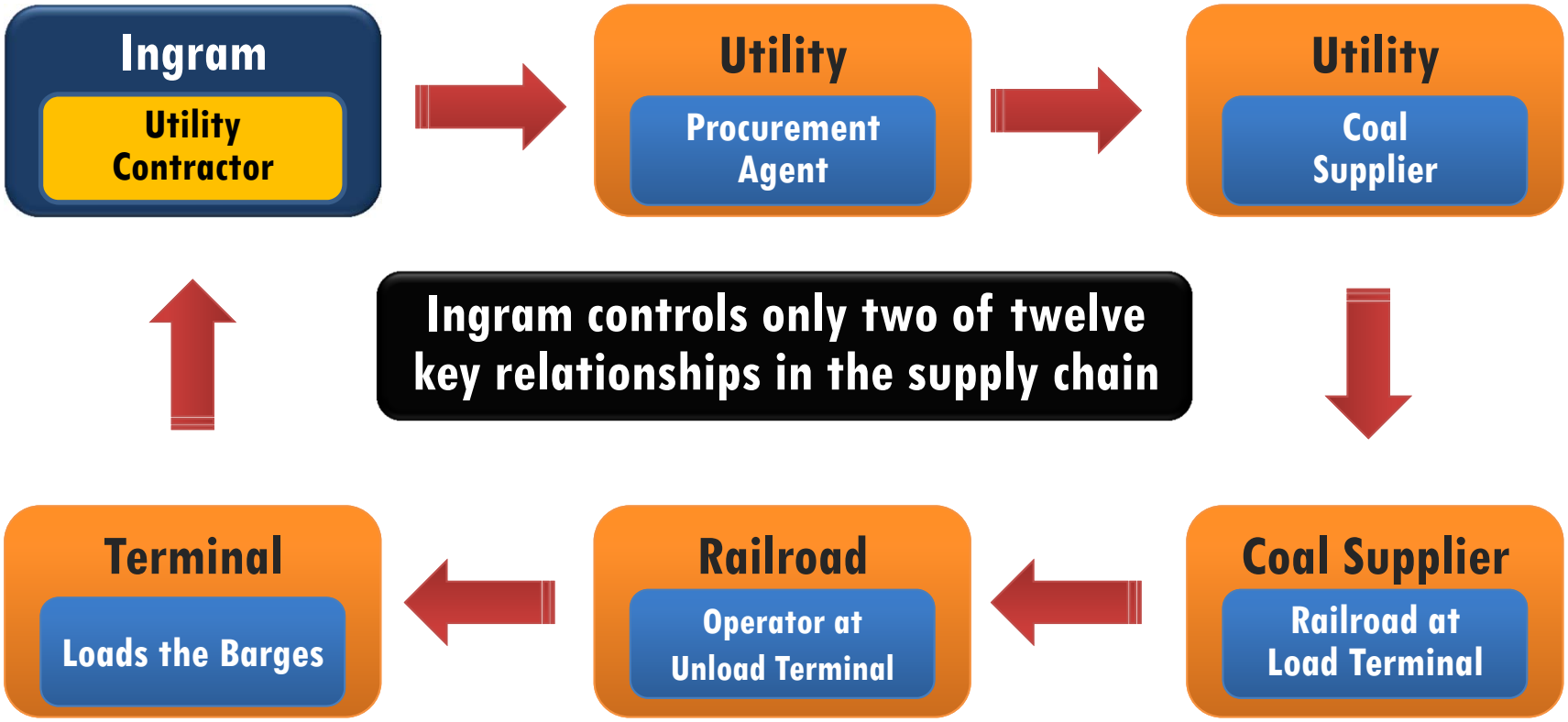

SUPPLY
CHAIN
www.SolidConverterGX.com

Our supply chain is diverse, with many intersections that can influence successful towage patterns

- Usually in middle of the supply chain – little advanced notice
- Facilities several stops from the intended destination of customers
- Demand is “lumpy,” even from largest customers

For Example…

Typical supply chain of utility customer has multiple, often conflicting, interactions and dependencies



An Optimized Supply Chain...

where networks and other important technologies converge, creating new real-time interactions between our vessels, our associates, and our customers…

THE NEXT GENERATION OF SYSTEMS AND DECISION SUPPORT TOOLS FOR OUR FUNCTIONAL AND LINE MANAGERS

Our Strategic Imperative was to create high performance networks and systems that would capture and retain very granular elements of our operation

Our Strategic Imperative was to create high performance networks and systems that would capture and retain very granular elements of our operation

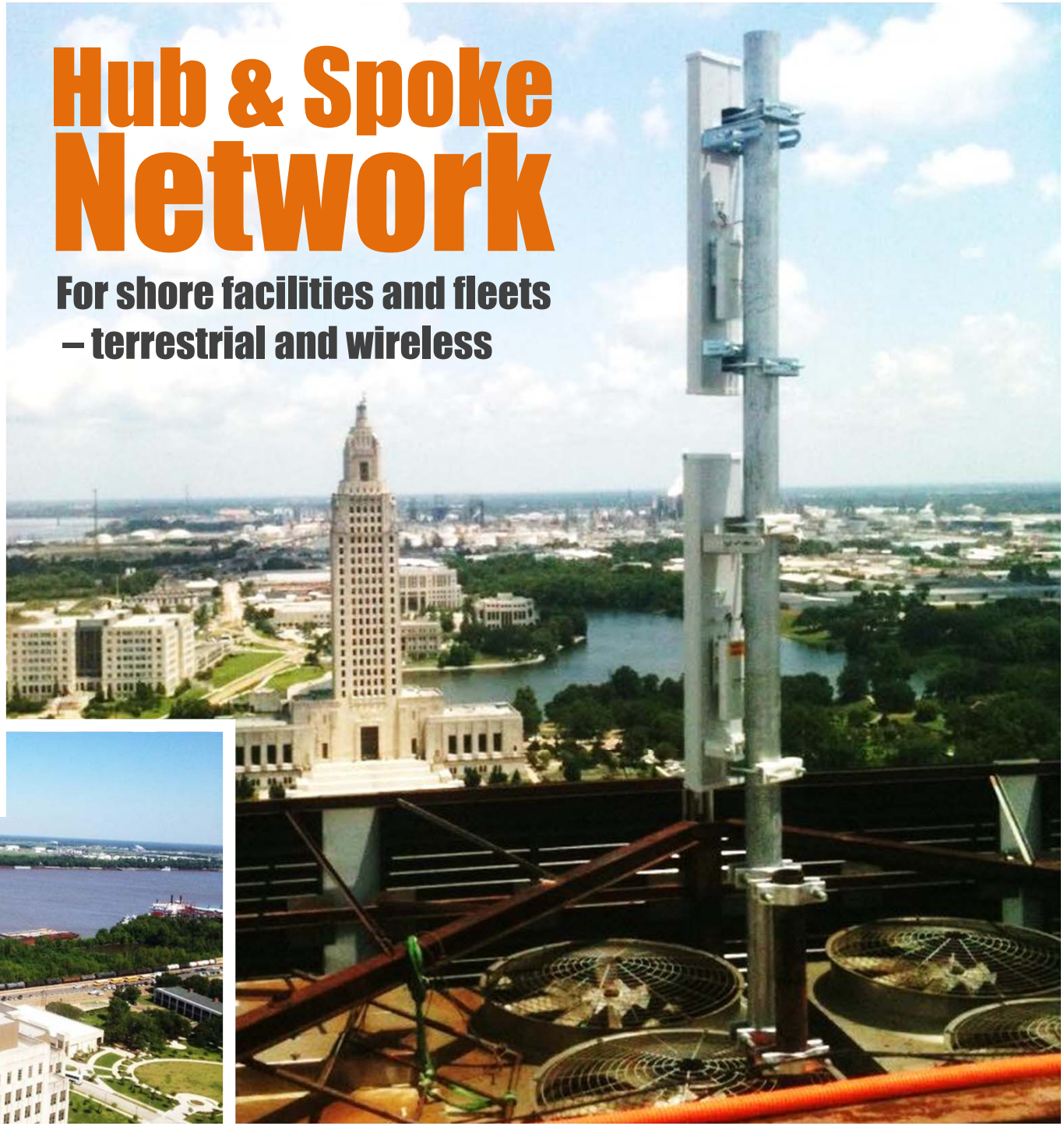
- Vessel and Shore - transparent and bullet proof interoperability
- High availability
- Compatible across the enterprise
- Standards based
- Anticipate evolution in tech

Our Design Principles carefully prescribed evolutionary and dynamic change capabilities

- Users create their own layout of screens in grids – self sufficient
- Quality and data integrity foundational
- All data is an important competitive advantage and is retained
- Pervasive, secure, and readily accessible data and tools for alerting and rapid decision making

Hub & Spoke Network

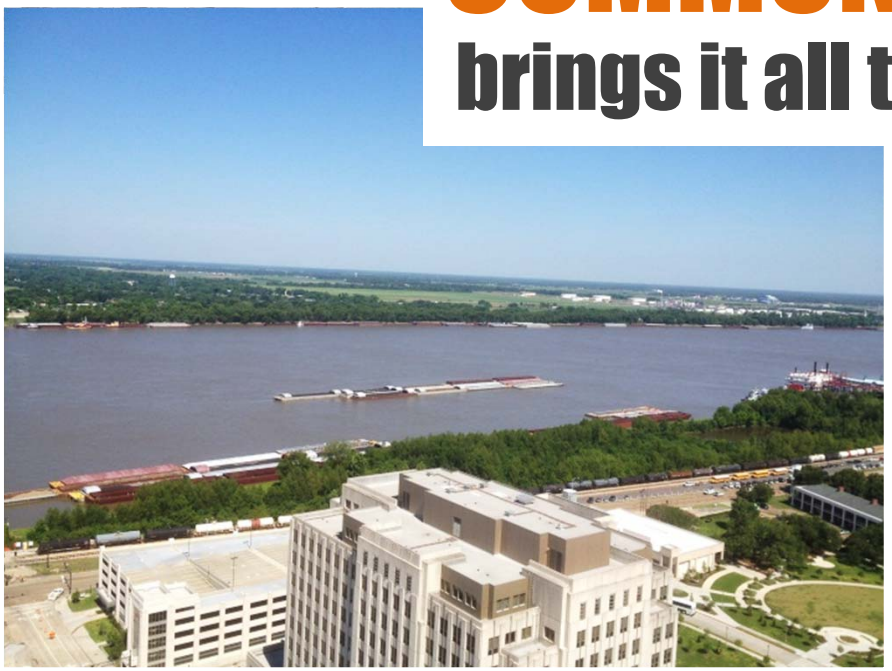
For shore facilities and fleets – terrestrial and wireless

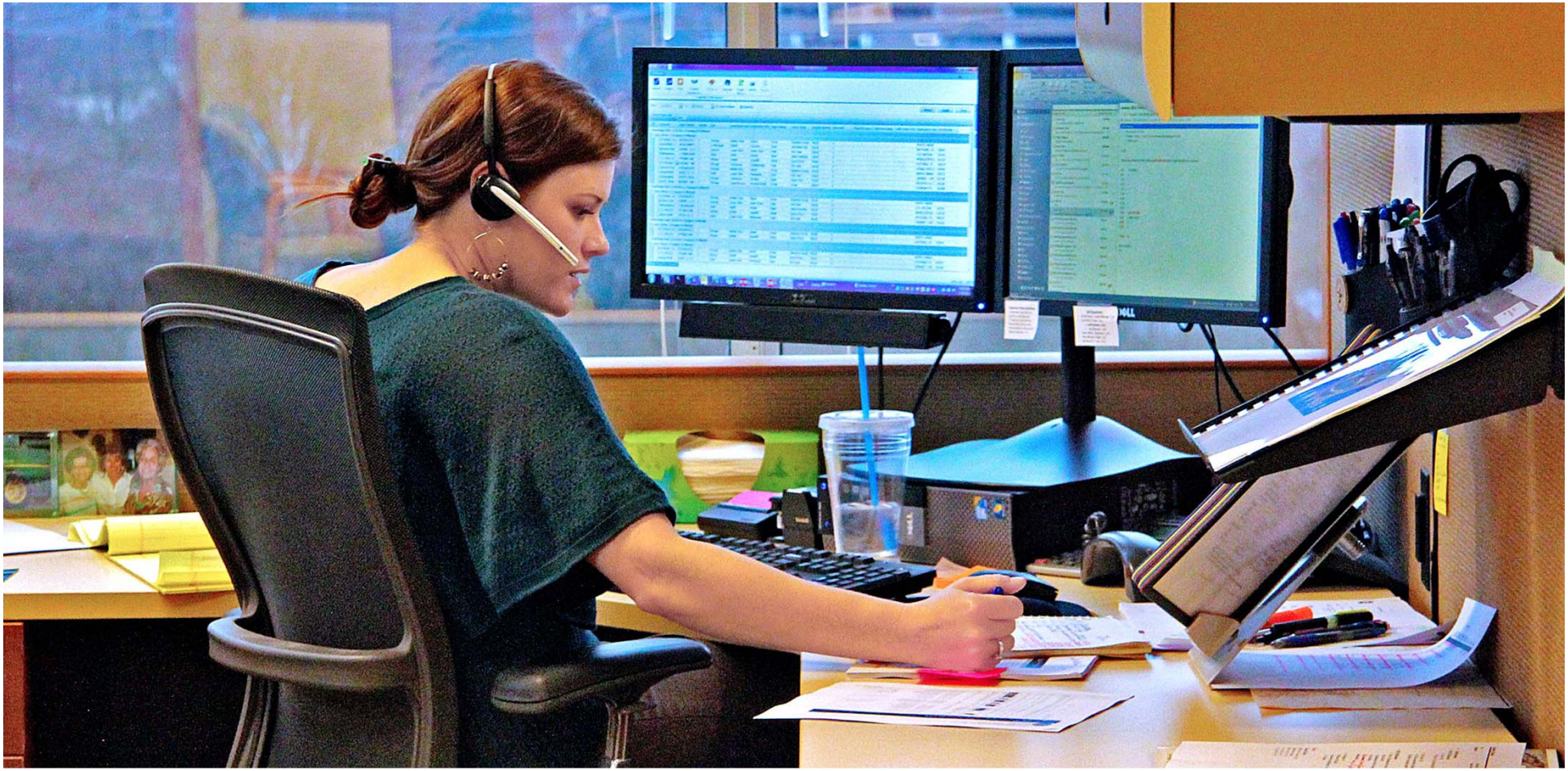


Onboard vessel systems
closely resemble corporate in features and function.

COMMUNICATIONS

brings it all together

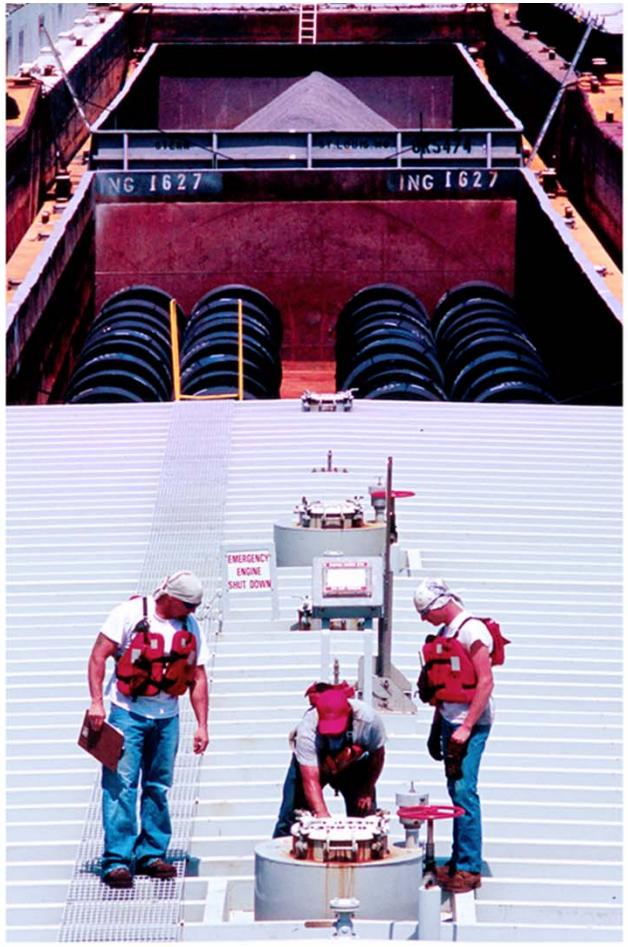


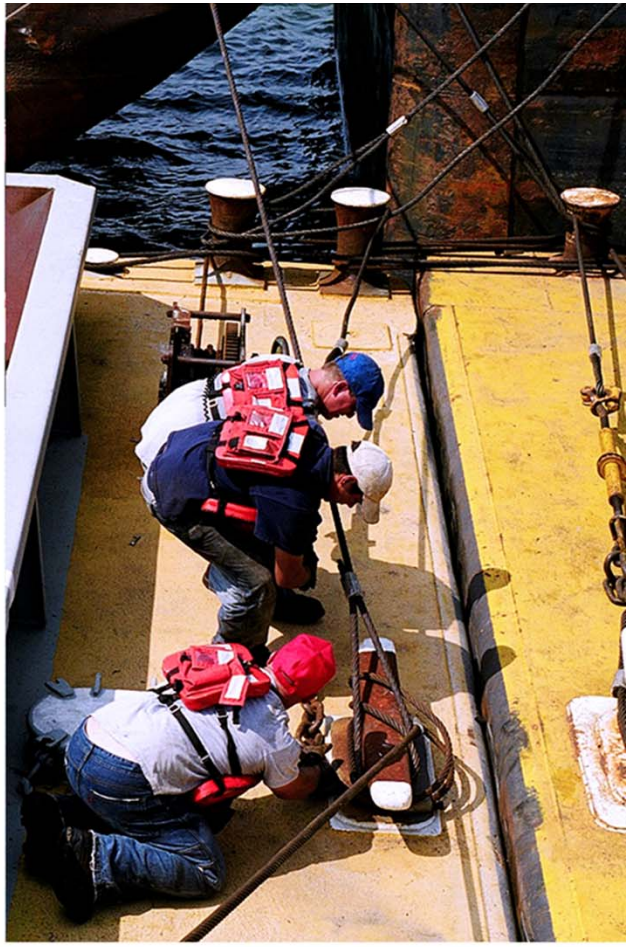


Orders begin with Customer Service

Most orders received by phone and email

Available barges remain a critical element in barge dispatch process for customers





Loaded barges are inspected and made ready for Linehaul Vessel Pickups

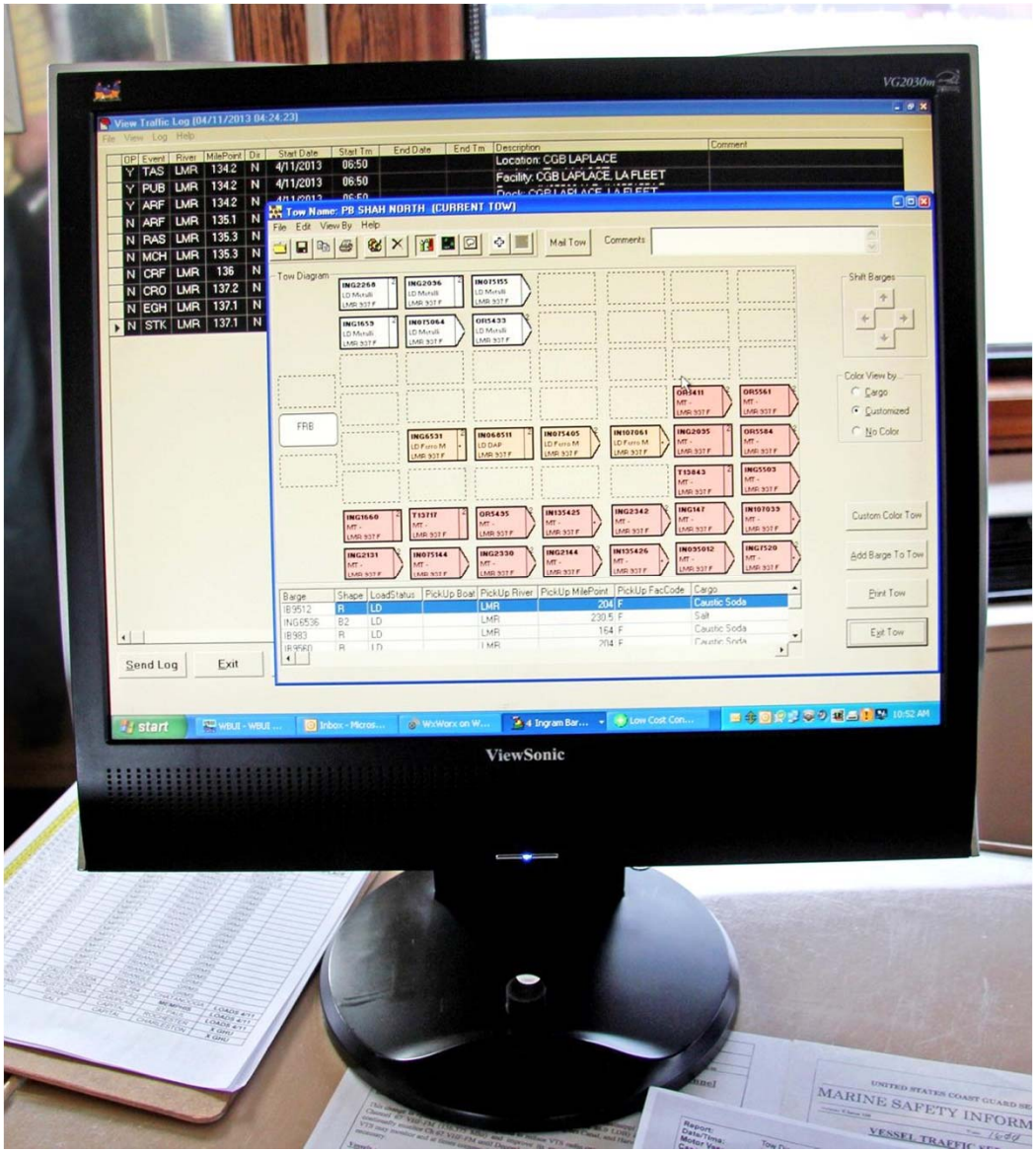
Throughout the loading and dispatch process, safety is of paramount importance to all.

Fleets and harbor boats dispatch barges to Begin Loading Process

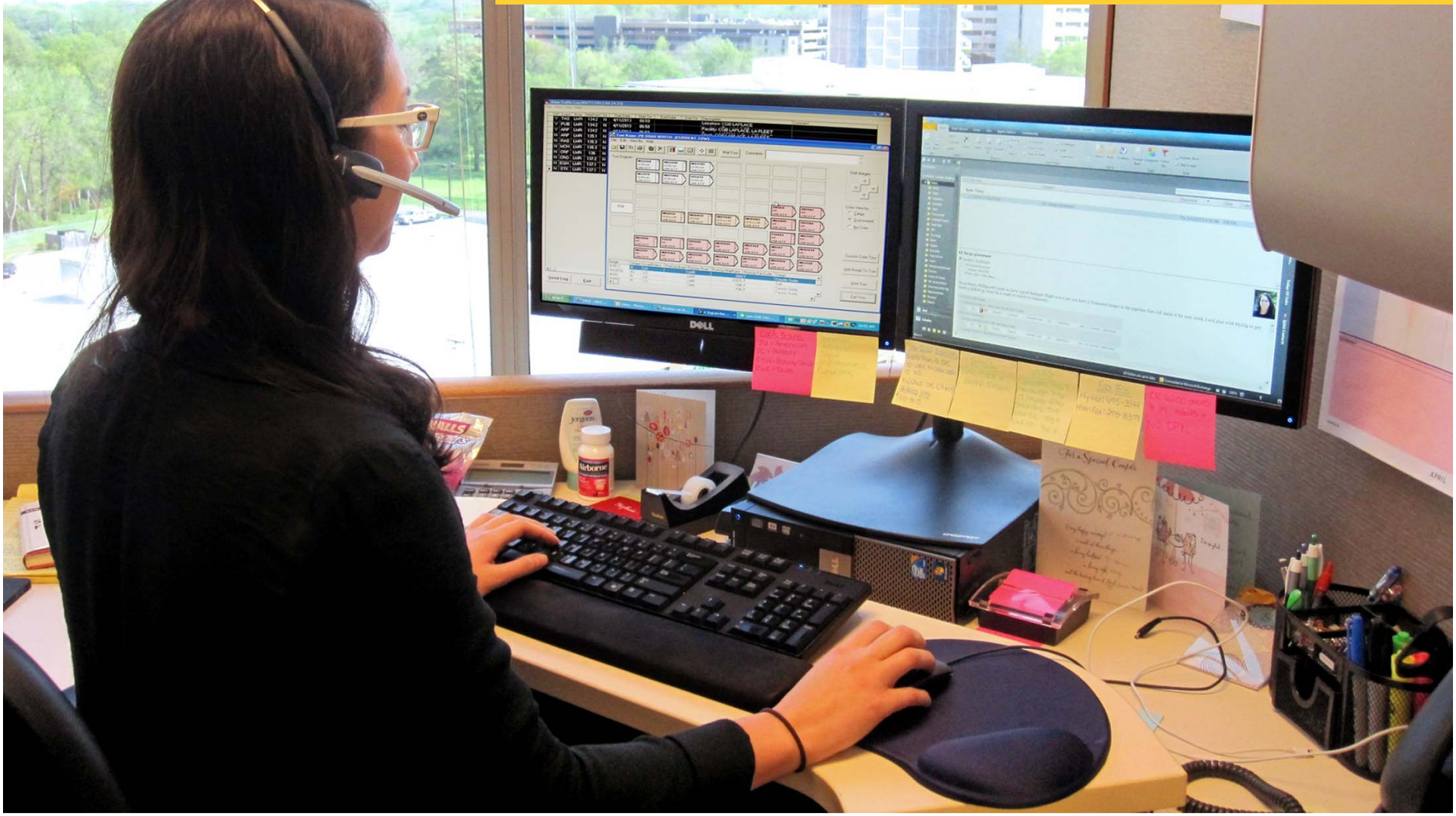
A typical Open Hopper Barge is 200’ x 35'

How do we do it?

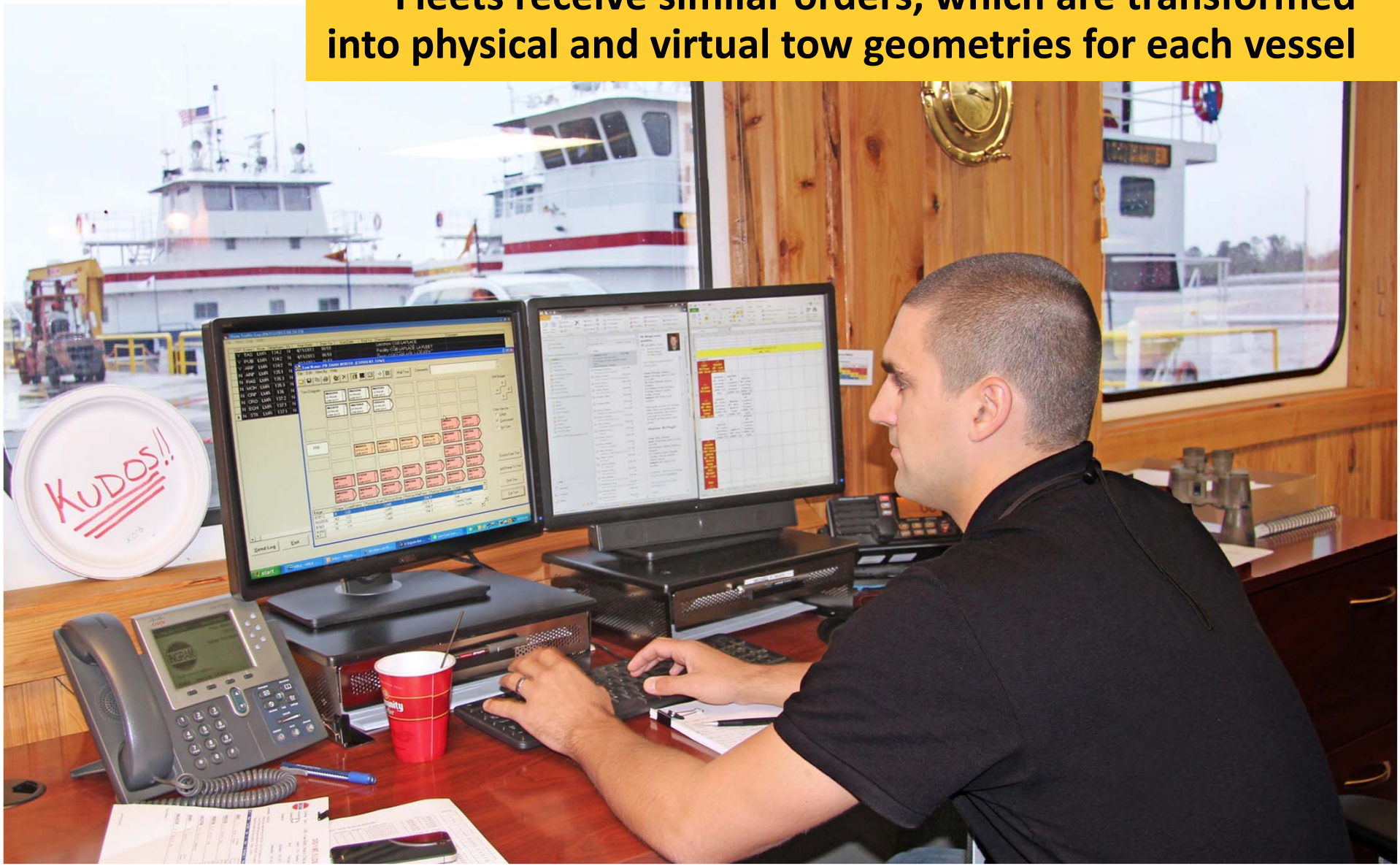
We focus on the tow as the essential unit of production, manifested as a tow diagram



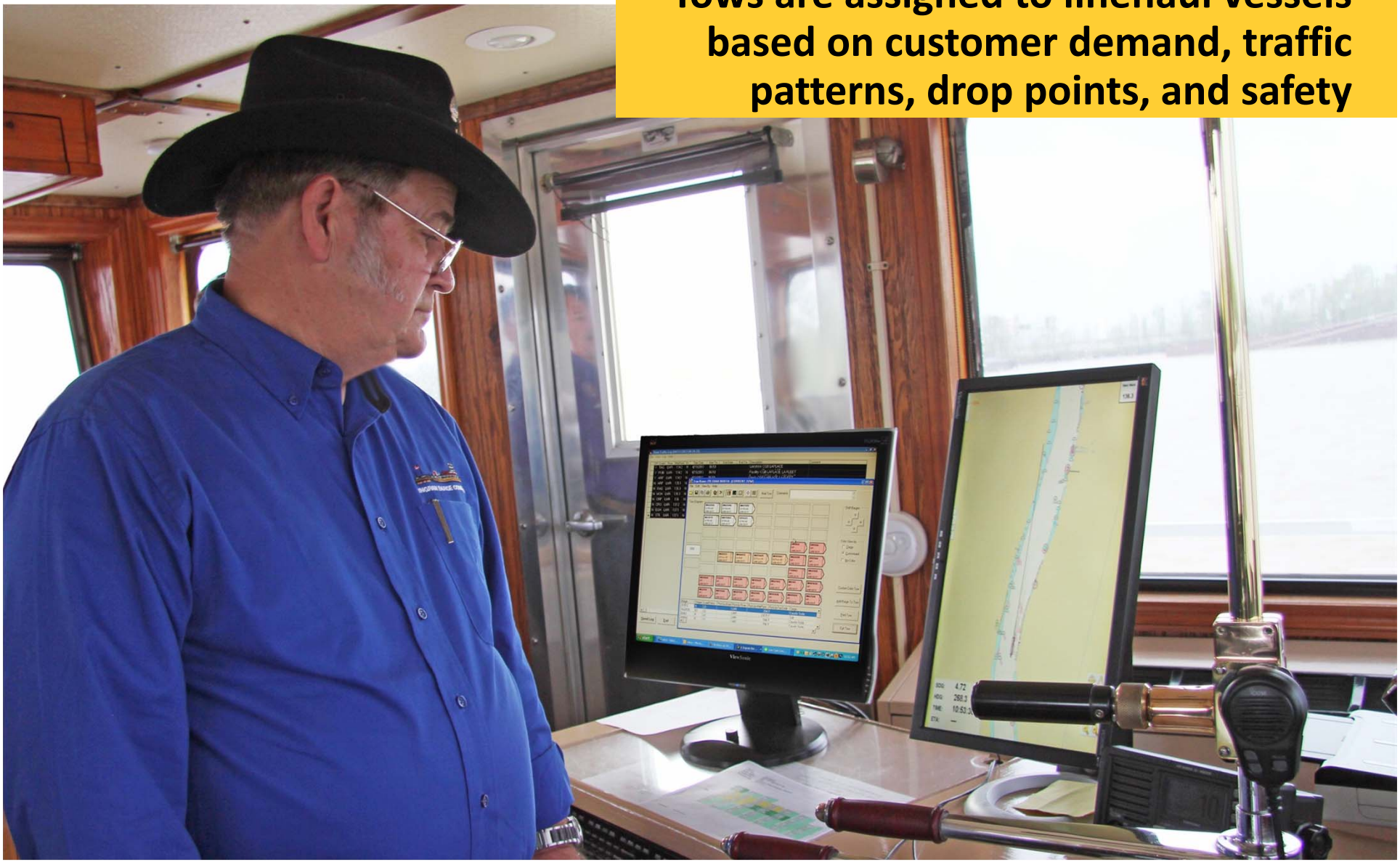
Close cooperation between shore and vessel ensures efficient and safe tow geometry

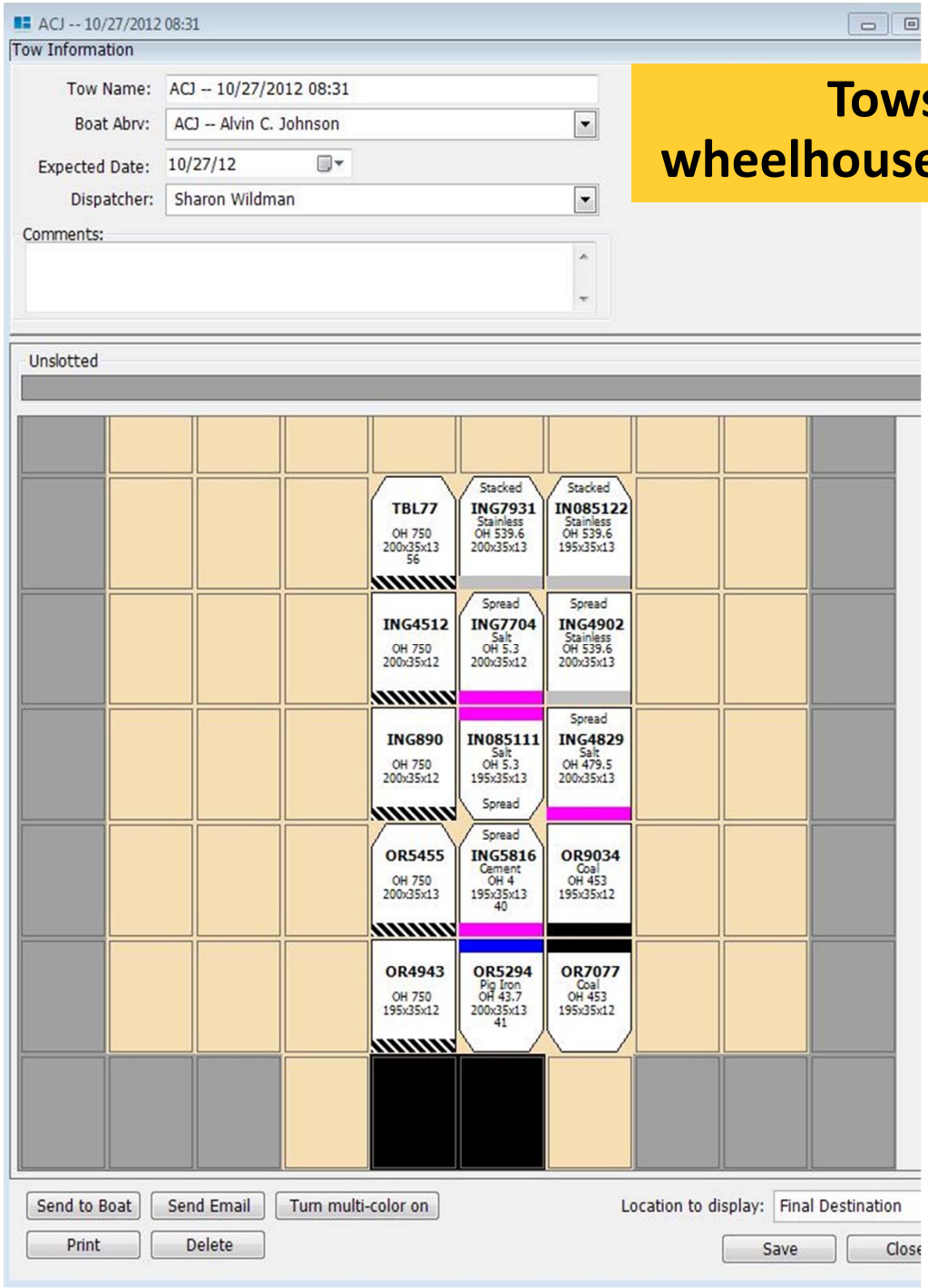


Fleets receive similar orders, which are transformed into physical and virtual tow geometries for each vessel



Tows are assigned to linehaul vessels based on customer demand, traffic patterns, drop points, and safety

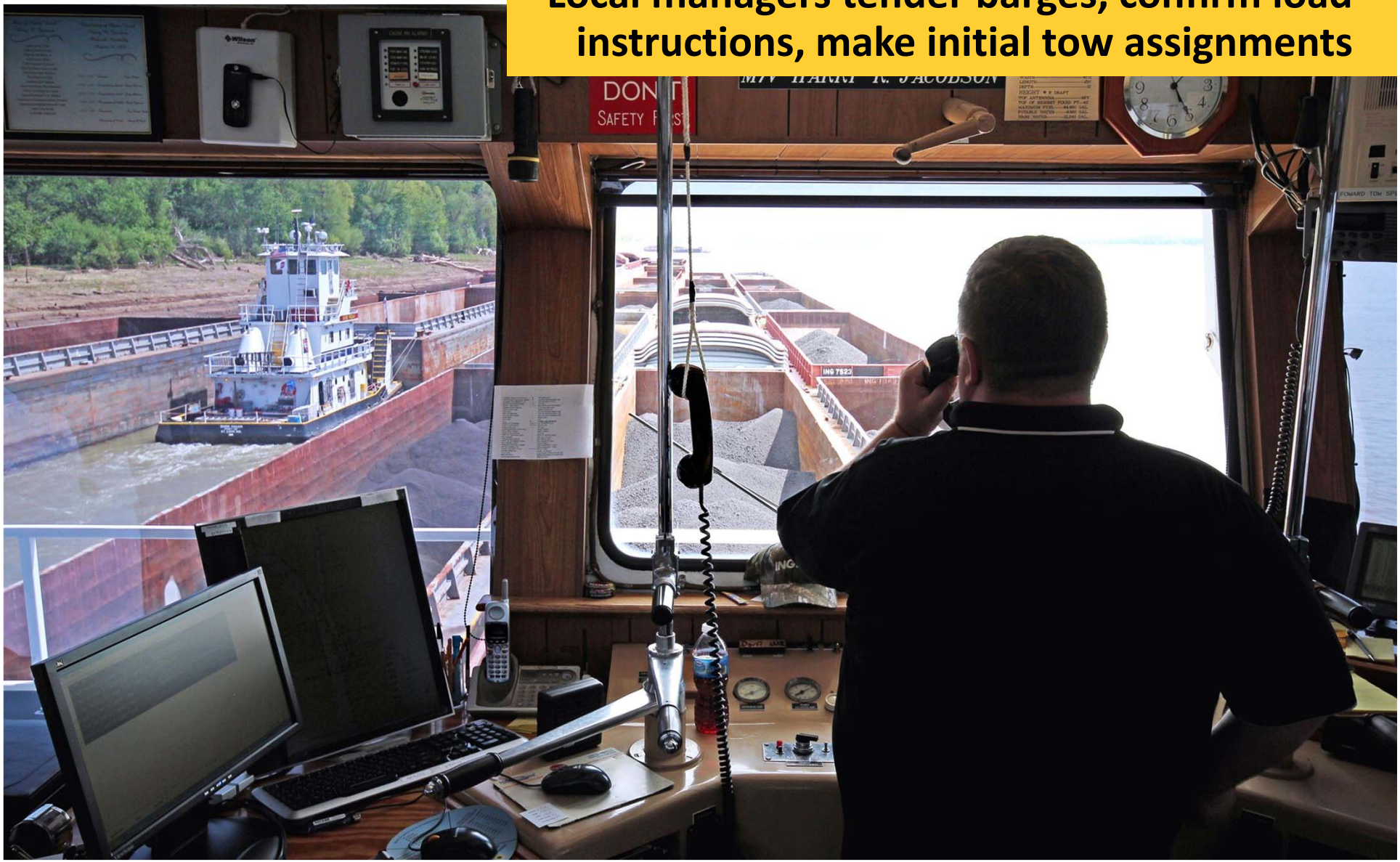




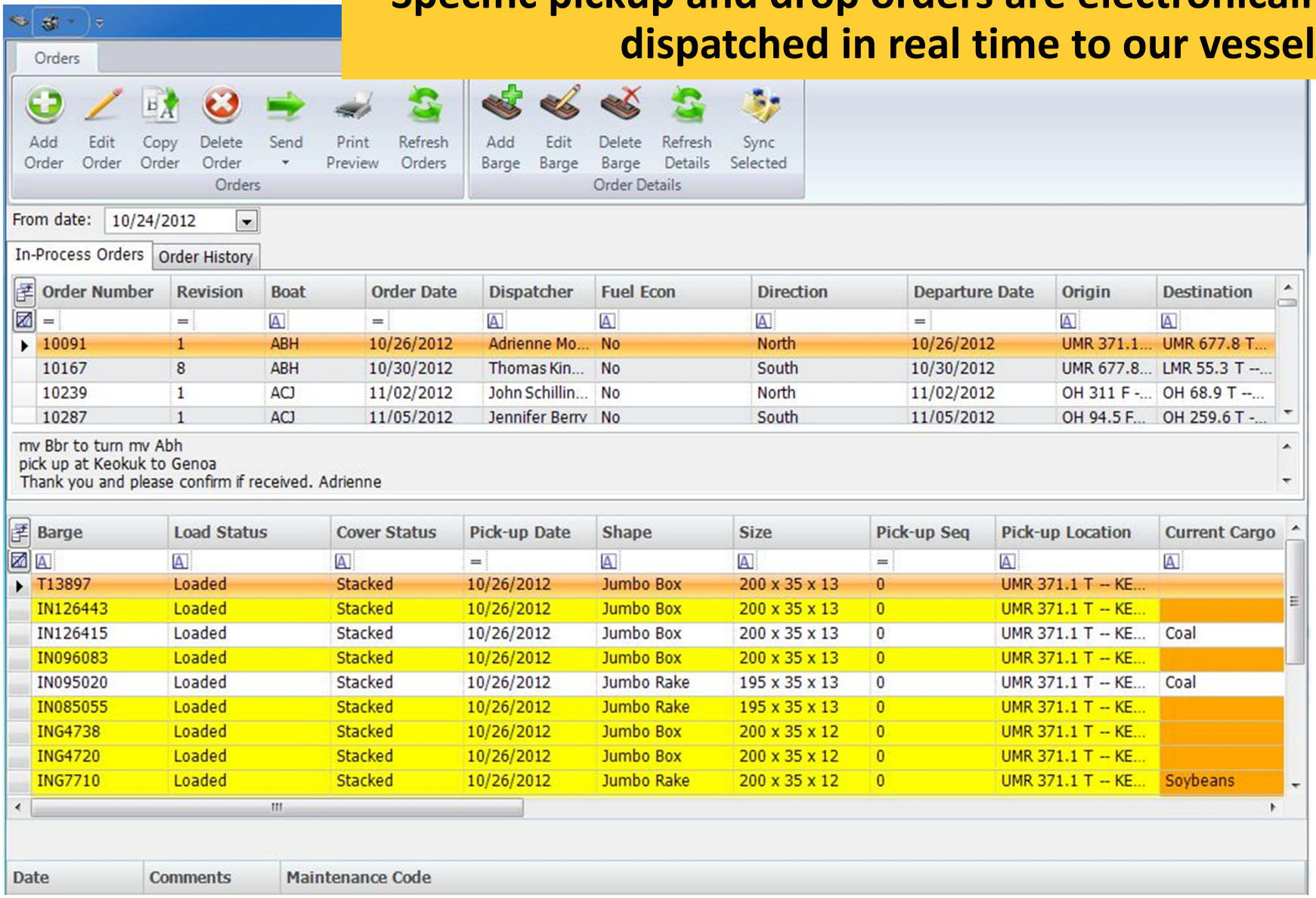
Tows are dynamically updated on the wheelhouse system throughout the network

- Tow placement can be adjusted by Captain to meet local needs
- Changes are dynamically sent back to shore systems
- Tow geometry can be electronically sent to regional fleets & customers

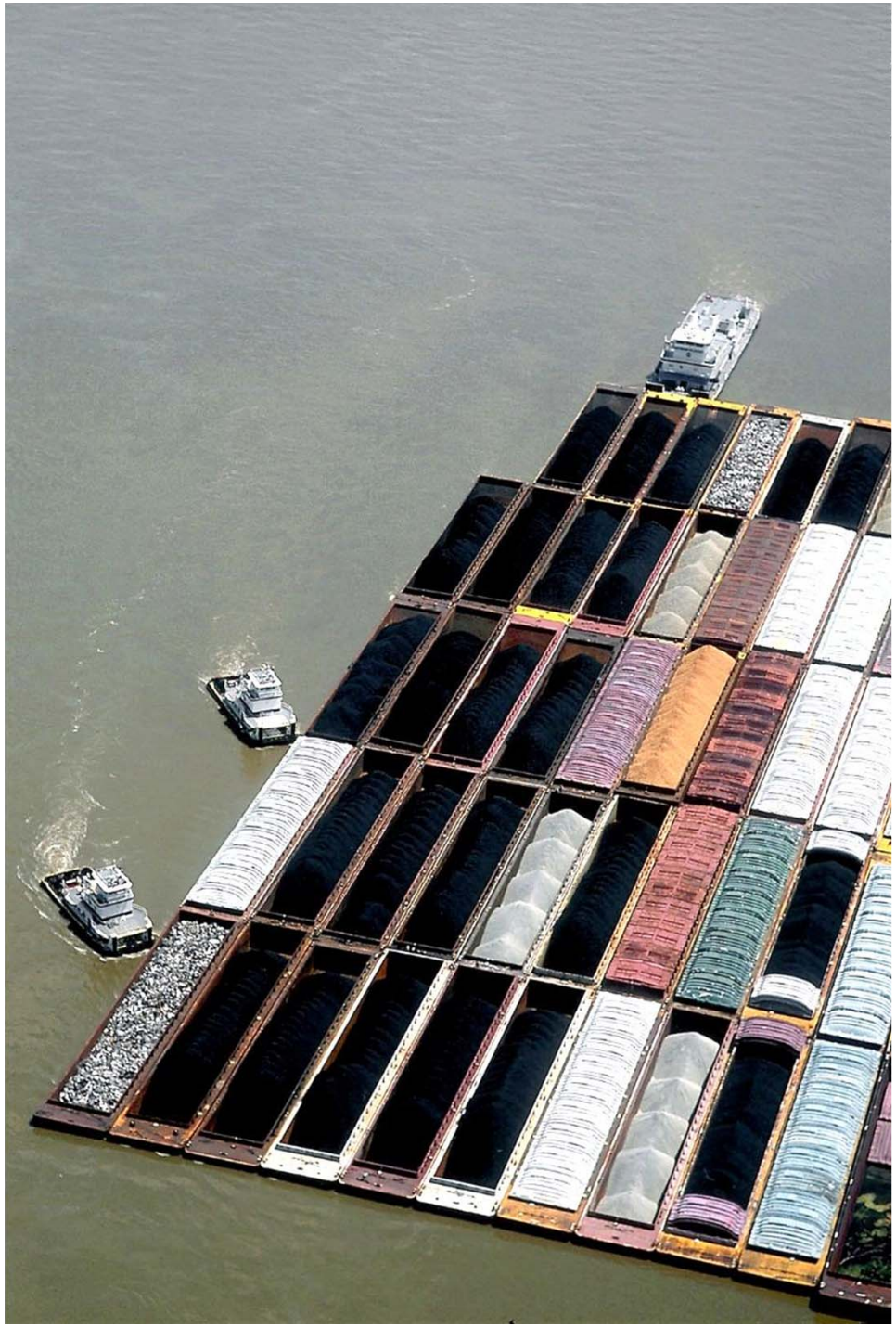
Local managers tender barges, confirm load instructions, make initial tow assignments



Specific pickup and drop orders are electronically dispatched in real time to our vessels



Linehaul towboats are assigned to operating territories to achieve the lowest possible unit towing costs



At hubs, barges are shifted and Reassigned to Outbound Tows

- Outbound virtual tows are pre-built by shore associates based on inbound/outbound req’ts, updated river conditions and changing customer demands
- Orders are electronically dispatched to affected vessels
- Physical tows are pre-built in fleet by harbor vessels and staged for linehaul pickup

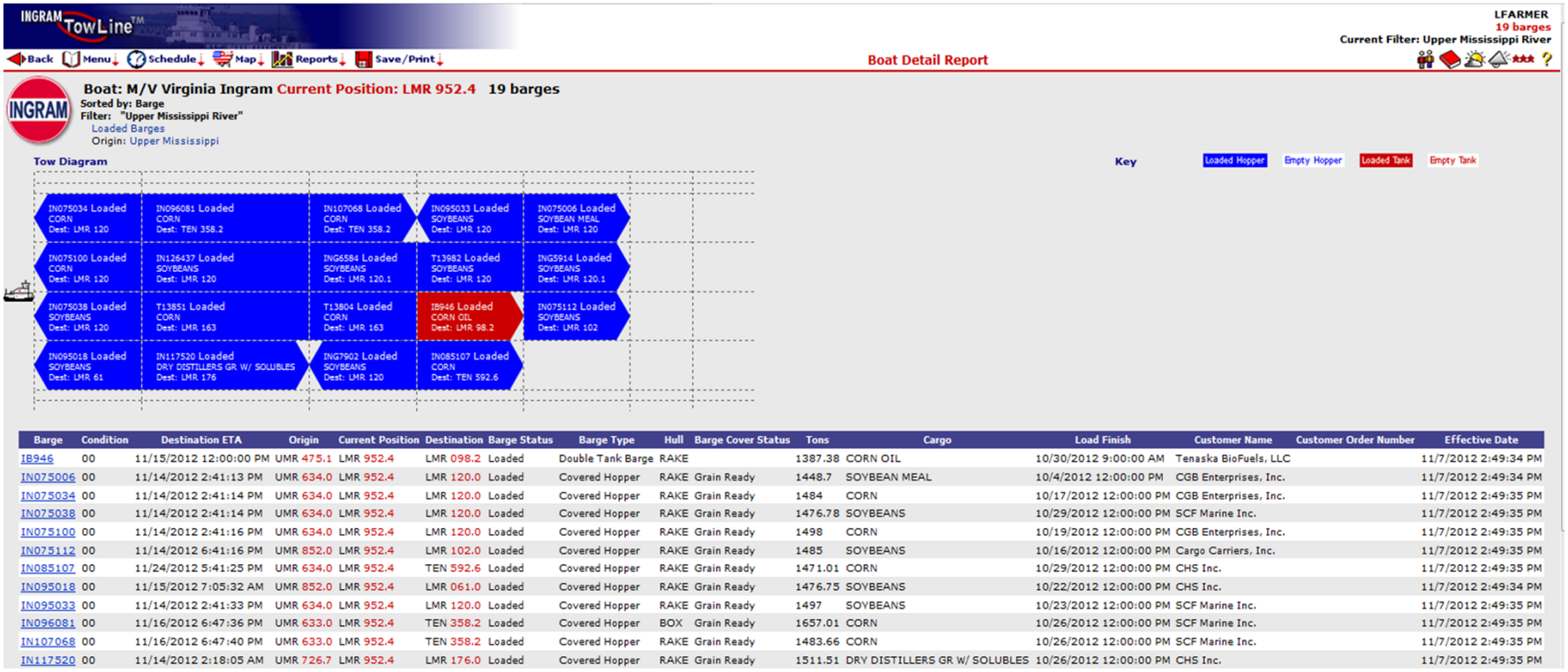
Linehaul vessels receive electronic orders for Pickups from Docks

Barges are assembled into flotillas called “tows.” On non-locking waterways, tows can become quite large

Customers are given full status through Ingram's Towline™ System

Towline works for everyone by providing information the way customers need it, when needed.

Customers can create their own reports and have them delivered automatically



INGRAM TowLine™

LFARMER
19 barges
Current Filter: Upper Mississippi River

Back | Menu | Schedule | Map | Reports | Save/Print

Boat Detail Report

Boat: M/V Virginia Ingram Current Position: LMR 952.4 19 barges
Sorted by: Barge
Filter: "Upper Mississippi River"
Loaded Barges
Origin: Upper Mississippi

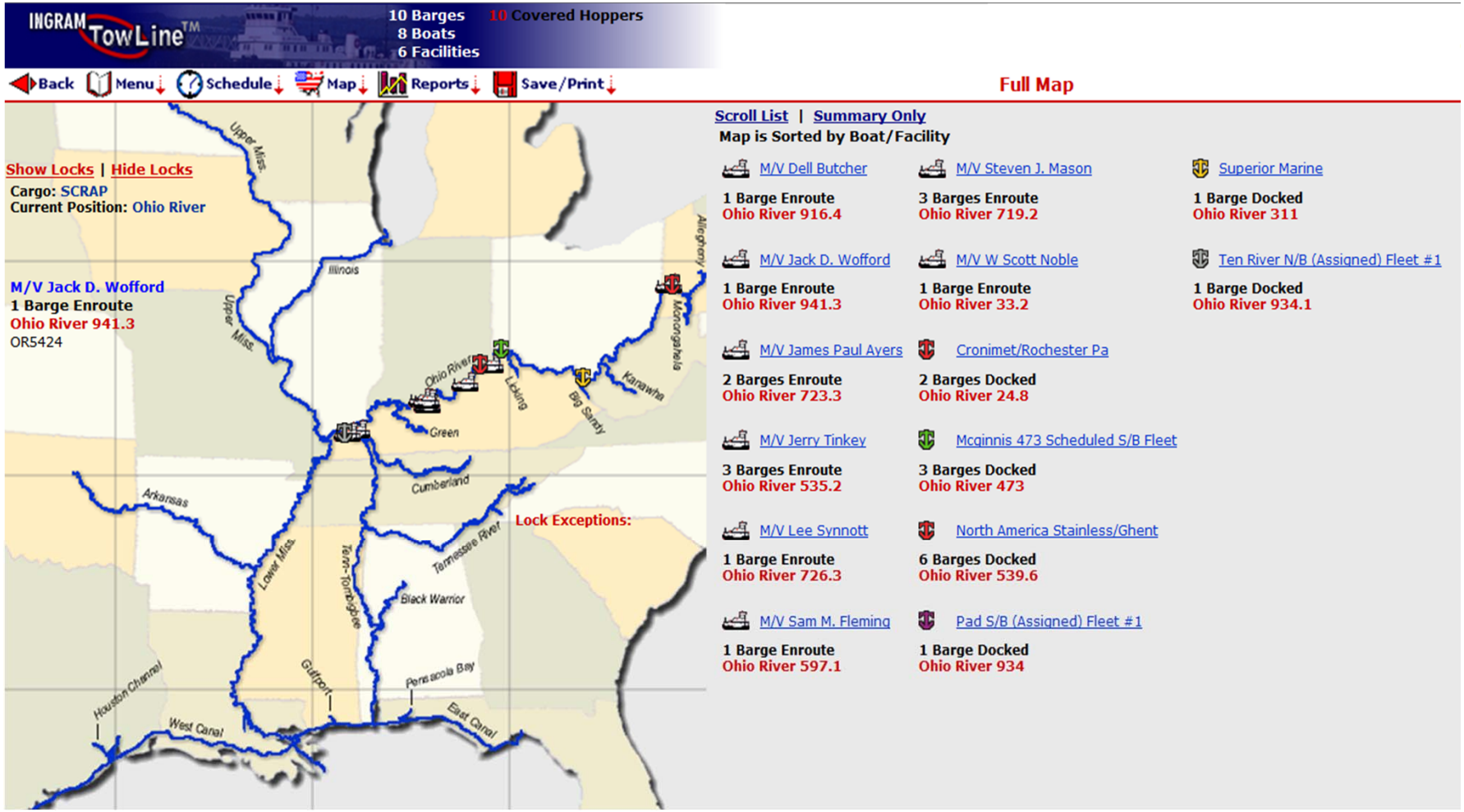
Tow Diagram

Key: Loaded Hopper | Empty Hopper | Loaded Tank | Empty Tank

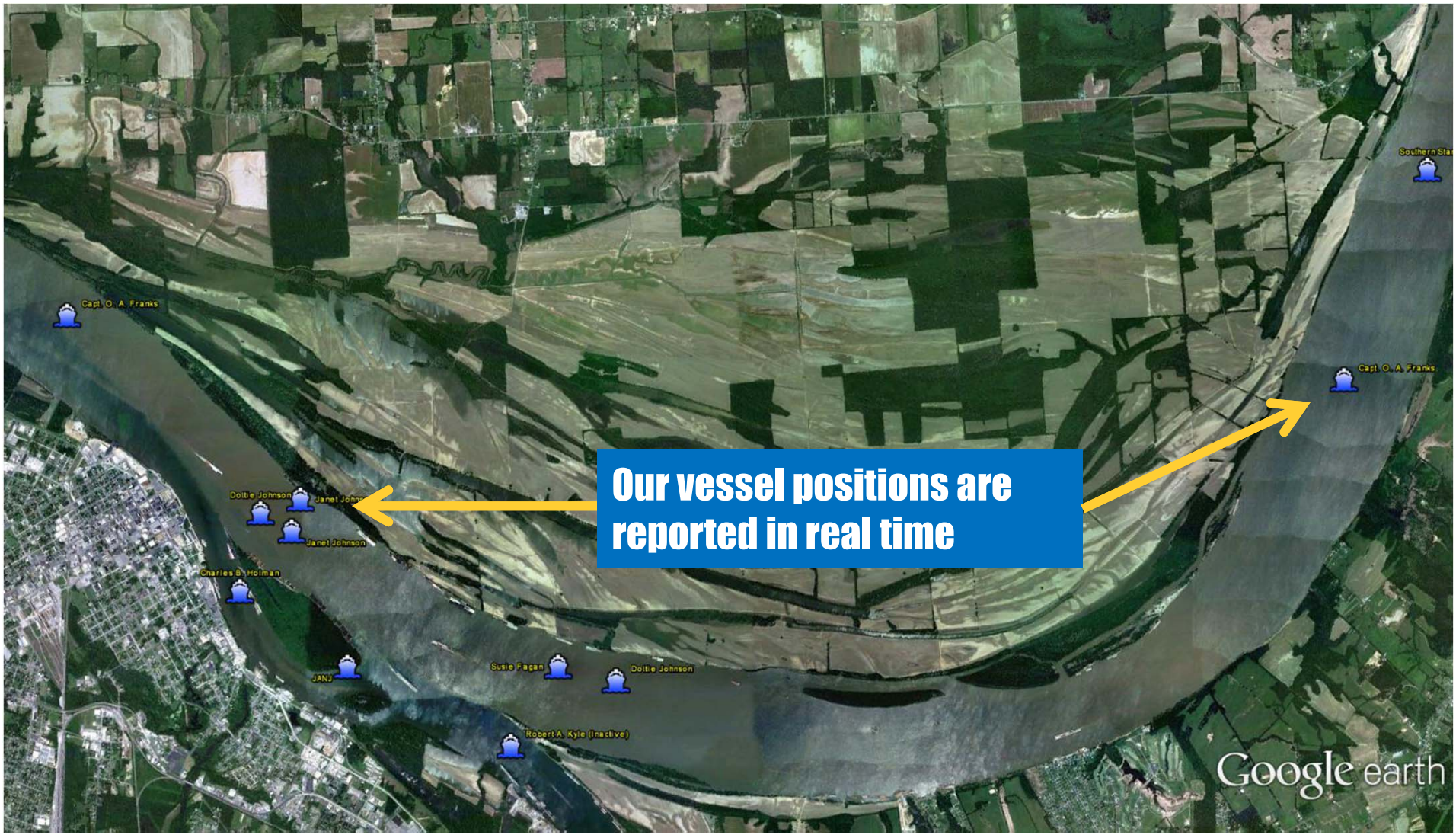
IN075034 Loaded CORN Dest: LMR 120	IN096081 Loaded CORN Dest: TEN 358.2	IN107068 Loaded CORN Dest: TEN 358.2	IN095033 Loaded SOYBEANS Dest: LMR 120	IN075006 Loaded SOYBEAN MEAL Dest: LMR 120
IN075100 Loaded CORN Dest: LMR 120	IN126437 Loaded SOYBEANS Dest: LMR 120	ING6584 Loaded SOYBEANS Dest: LMR 120.1	T13982 Loaded SOYBEANS Dest: LMR 120	ING5914 Loaded SOYBEANS Dest: LMR 120.1
IN075038 Loaded SOYBEANS Dest: LMR 120	T13851 Loaded CORN Dest: LMR 163	T13804 Loaded CORN Dest: LMR 163	IB946 Loaded CORN OIL Dest: LMR 98.2	IN075112 Loaded SOYBEANS Dest: LMR 102
IN095018 Loaded SOYBEANS Dest: LMR 61	IN117520 Loaded DRY DISTILLERS GR W/ SOLUBLES Dest: LMR 176	ING7902 Loaded SOYBEANS Dest: LMR 120	IN085107 Loaded CORN Dest: TEN 592.6	

Barge	Condition	Destination ETA	Origin	Current Position	Destination	Barge Status	Barge Type	Hull	Barge Cover Status	Tons	Cargo	Load Finish	Customer Name	Customer Order Number	Effective Date
IB946	00	11/15/2012 12:00:00 PM	UMR 475.1	LMR 952.4	LMR 098.2	Loaded	Double Tank Barge	RAKE		1387.38	CORN OIL	10/30/2012 9:00:00 AM	Tenaska BioFuels, LLC		11/7/2012 2:49:34 PM
IN075006	00	11/14/2012 2:41:13 PM	UMR 634.0	LMR 952.4	LMR 120.0	Loaded	Covered Hopper	RAKE	Grain Ready	1448.7	SOYBEAN MEAL	10/4/2012 12:00:00 PM	CGB Enterprises, Inc.		11/7/2012 2:49:34 PM
IN075034	00	11/14/2012 2:41:14 PM	UMR 634.0	LMR 952.4	LMR 120.0	Loaded	Covered Hopper	RAKE	Grain Ready	1484	CORN	10/17/2012 12:00:00 PM	CGB Enterprises, Inc.		11/7/2012 2:49:35 PM
IN075038	00	11/14/2012 2:41:14 PM	UMR 634.0	LMR 952.4	LMR 120.0	Loaded	Covered Hopper	RAKE	Grain Ready	1476.78	SOYBEANS	10/29/2012 12:00:00 PM	SCF Marine Inc.		11/7/2012 2:49:35 PM
IN075100	00	11/14/2012 2:41:16 PM	UMR 634.0	LMR 952.4	LMR 120.0	Loaded	Covered Hopper	RAKE	Grain Ready	1498	CORN	10/19/2012 12:00:00 PM	CGB Enterprises, Inc.		11/7/2012 2:49:35 PM
IN075112	00	11/14/2012 6:41:16 PM	UMR 852.0	LMR 952.4	LMR 102.0	Loaded	Covered Hopper	RAKE	Grain Ready	1485	SOYBEANS	10/16/2012 12:00:00 PM	Cargo Carriers, Inc.		11/7/2012 2:49:35 PM
IN085107	00	11/24/2012 5:41:25 PM	UMR 634.0	LMR 952.4	TEN 592.6	Loaded	Covered Hopper	RAKE	Grain Ready	1471.01	CORN	10/29/2012 12:00:00 PM	CHS Inc.		11/7/2012 2:49:35 PM
IN095018	00	11/15/2012 7:05:32 AM	UMR 852.0	LMR 952.4	LMR 061.0	Loaded	Covered Hopper	RAKE	Grain Ready	1476.75	SOYBEANS	10/22/2012 12:00:00 PM	CHS Inc.		11/7/2012 2:49:34 PM
IN095033	00	11/14/2012 2:41:33 PM	UMR 634.0	LMR 952.4	LMR 120.0	Loaded	Covered Hopper	RAKE	Grain Ready	1497	SOYBEANS	10/23/2012 12:00:00 PM	SCF Marine Inc.		11/7/2012 2:49:35 PM
IN096081	00	11/16/2012 6:47:36 PM	UMR 633.0	LMR 952.4	TEN 358.2	Loaded	Covered Hopper	BOX	Grain Ready	1657.01	CORN	10/26/2012 12:00:00 PM	SCF Marine Inc.		11/7/2012 2:49:35 PM
IN107068	00	11/16/2012 6:47:40 PM	UMR 633.0	LMR 952.4	TEN 358.2	Loaded	Covered Hopper	RAKE	Grain Ready	1483.66	CORN	10/26/2012 12:00:00 PM	SCF Marine Inc.		11/7/2012 2:49:35 PM
IN117520	00	11/14/2012 2:18:05 AM	UMR 726.7	LMR 952.4	LMR 176.0	Loaded	Covered Hopper	RAKE	Grain Ready	1511.51	DRY DISTILLERS GR W/ SOLUBLES	10/26/2012 12:00:00 PM	CHS Inc.		11/7/2012 2:49:35 PM

Geospatial representations are an important component of our customer's experience

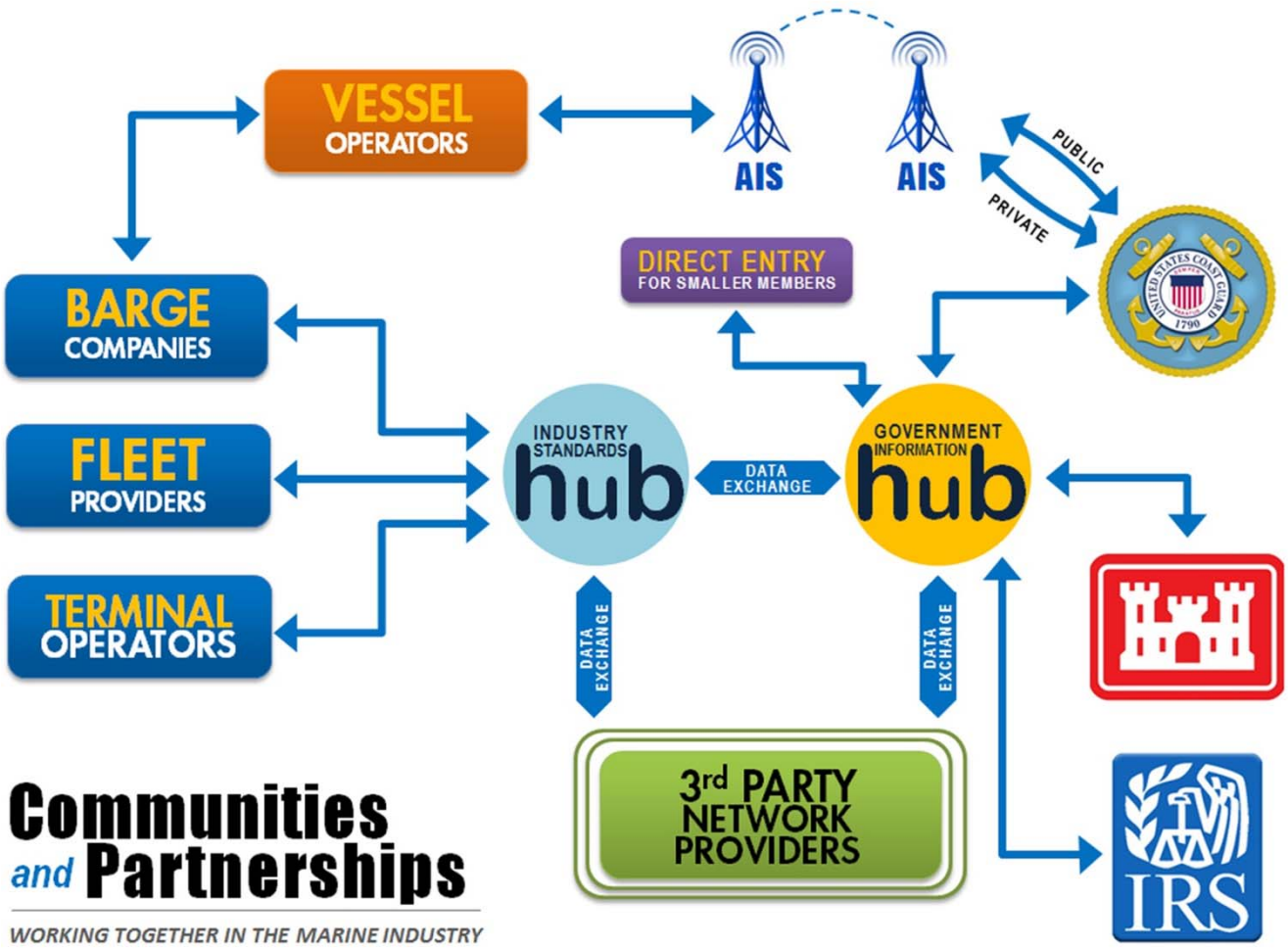


Common and Strategic platforms are a key enabler



eCommerce emerges as key technology-enabling mechanism in supply chain

- Not just orders and billing
- Close alliance
- Standards based for mapping



Our Advantages…

Leading carrier on America's inland waterways

- Nearly 5,000 hopper and tank barges
- More than 150 towboats ranging up to 10,500HP

Superior Customer Service

Our Associates			
Shore-side	520	Marine	1,941
20-30+ Yrs	26%	20-30+ Yrs	13%
10-20 Yrs	21%	10-20 Yrs	40%

- Instantly pinpoint the location of towboats and barges
- Deliver on time, within budget, while complying with all environmental requirements
- In-house repair and fueling capabilities
- Best possible service & value for transportation dollar

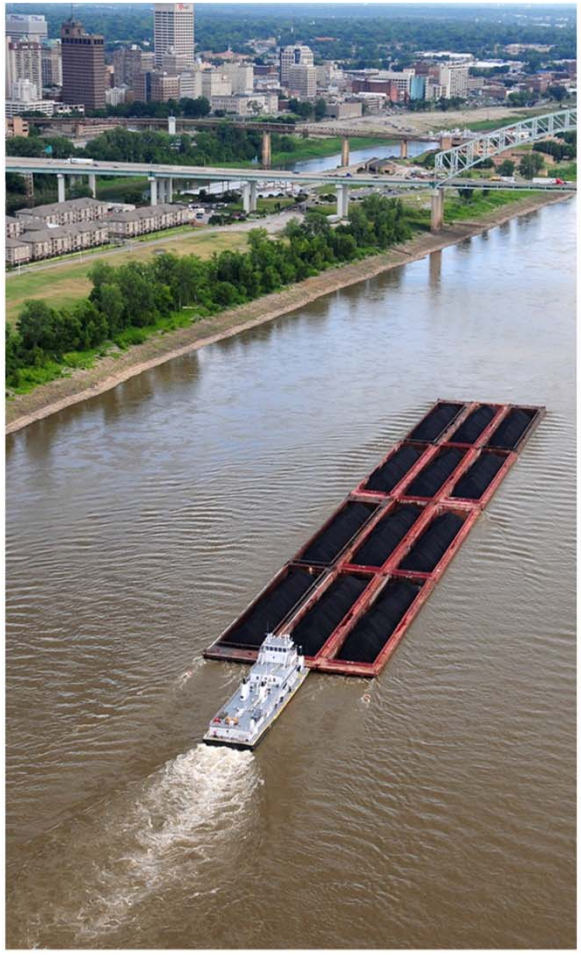
State-of-the-Art Information Systems

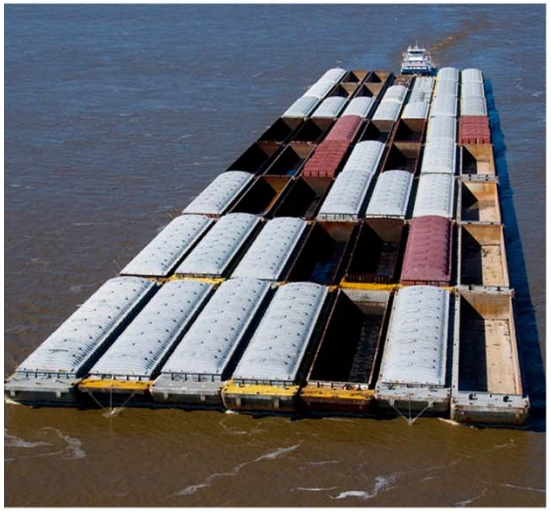
- Direct satellite communications with our vessels
- Pioneered use of electronic charting systems using Differential GPS & radar integration technology

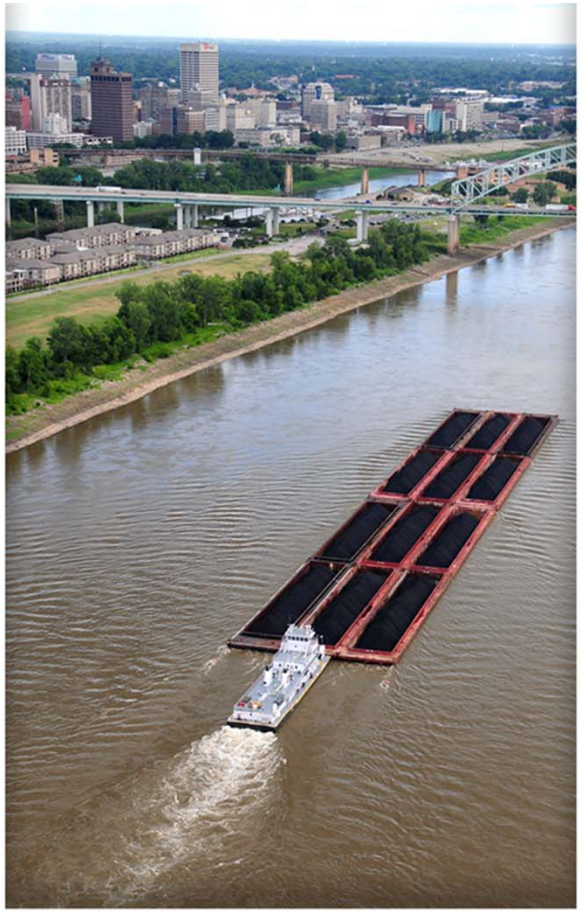
Training & Safety

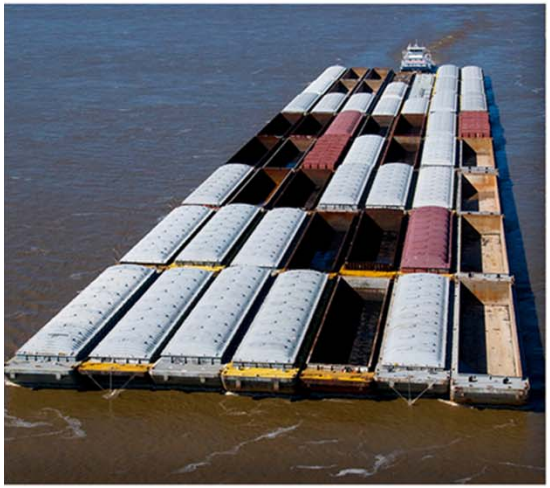
- Stringent hiring practices & extensive safety training
- In-house deckhand training school

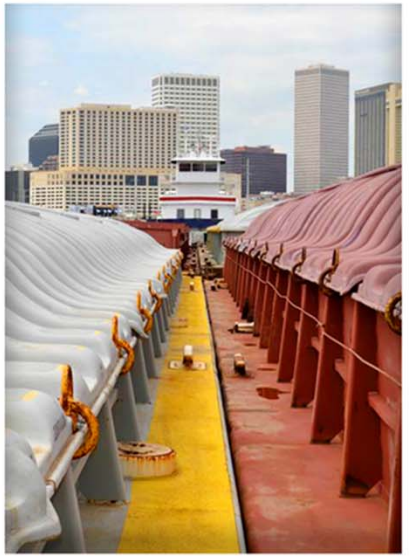
…translate to a Total eCommerce Advantage.











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