

Track. Manage. Optimize.

TrenStar™
One Smart Move



RFID Keg Tracking / Utilization
from Vision to Value

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TrenStar Overview

- ◆ Founded in 2001 as a holding company to manage the business activities undertaken from merger between Tencor Solutions and MicroStar Logistics
- ◆ 11-years of Asset Management experience / best practices
- ◆ Asset Tracking of over 5-million high-value assets
- ◆ Approach - TrenStar matches appropriate technology with optimized business processes to provide total visibility and control of high-value assets
- ◆ Vendor Neutral – TrenStar works with 3rd party engineers and commercial testing facilities to identify, test and authenticate appropriate solution options for our clients
- ◆ Business model offers differentiated and improved solutions for customers in asset intensive industries
- ◆ One of the first companies to solve RFID wave interference in metal on metal or liquid in metal environments

Recognized Technology and Services Leader



2005 Innovation Award

"TrenStar deserved to be singled out for having a unique business model that combines asset acquisition and tracking technology that includes RFID and a variety of management services."

-- Bruce Richardson, AMR Research



TrenStar ranks #93 fastest growing technology company for 2006 on Deloitte's annual ranking of the fastest growing technology companies in North America.



- 2007 - TrenStar ranked in Top 5 of *Denver Business Journal's* Denver-Area Software Developers list for five consecutive years
- 2005 - TrenStar ranked #13 as the Fastest-Growing Large Denver-Area Private Company
- 2005 - TrenStar ranked #42 on the Denver-Area Private Companies list, one of only two companies in the top 50 that is less than five years old



Deloitte's Colorado Technology Fast 50 program ranks TrenStar as the fifth fastest growing technology company in Colorado.

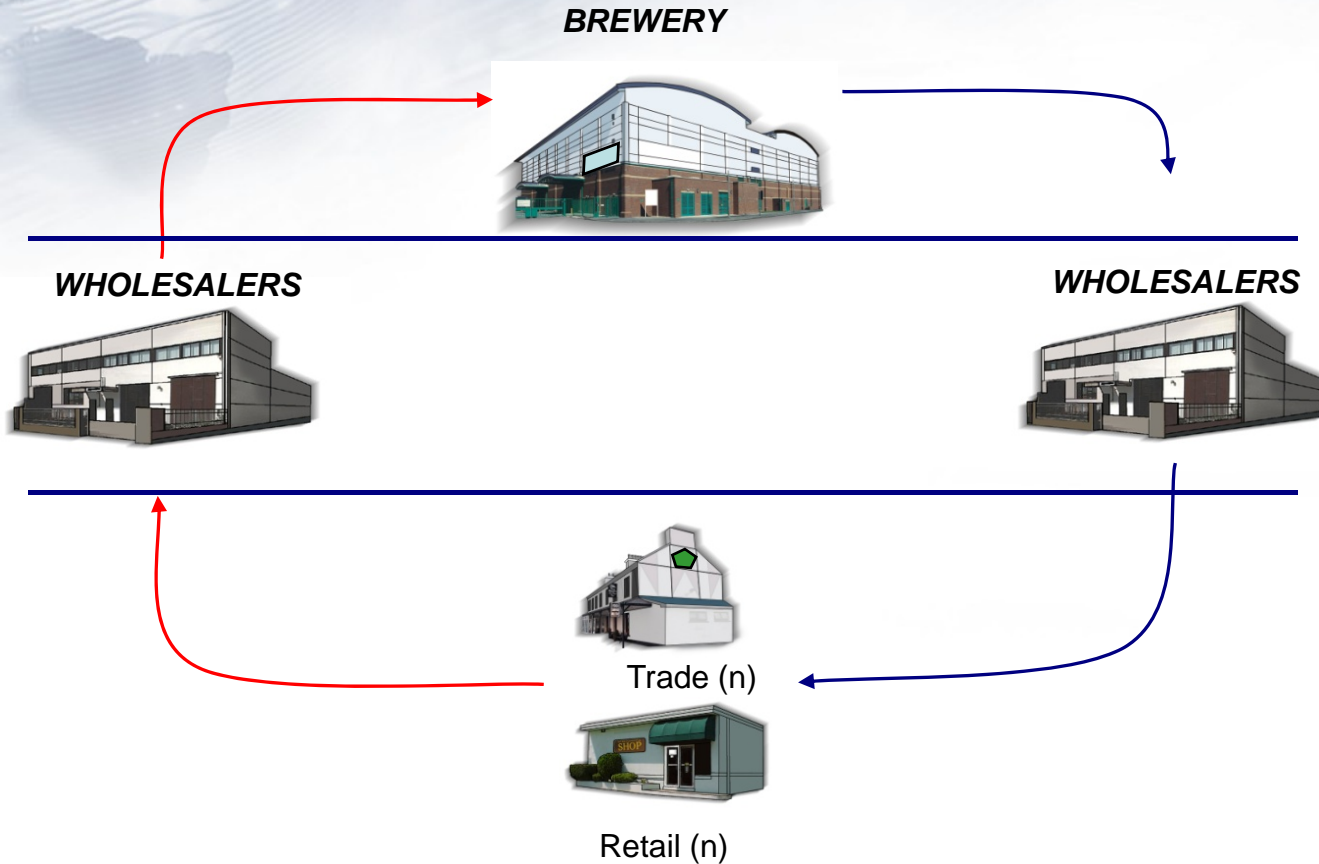


"The selection criteria for this year's "100" list centered on how end users of supply chain technology are working with solution providers to enable their supply and demand chains. TrenStar was selected because among other reasons the company reduced costs by ten percent for brewing client Carlsberg UK Ltd."

Brewing Challenges

- ◆ Keg management - poor visibility of kegs
- ◆ Lack of concrete utilization data and metrics
 - Educated guess of kegs in float
 - Estimated turn rates based on incomplete data
 - Estimated loss rates
 - No historical data available
- ◆ Identifying supply chain inefficiencies
- ◆ Reduce losses
- ◆ Ability to respond quickly to changing market dynamics
- ◆ Tracking preventative maintenance

Challenging 3-Tier Distribution Model



- Flow of Full Kegs
- Flow of Empty Kegs

TrenStar Approach

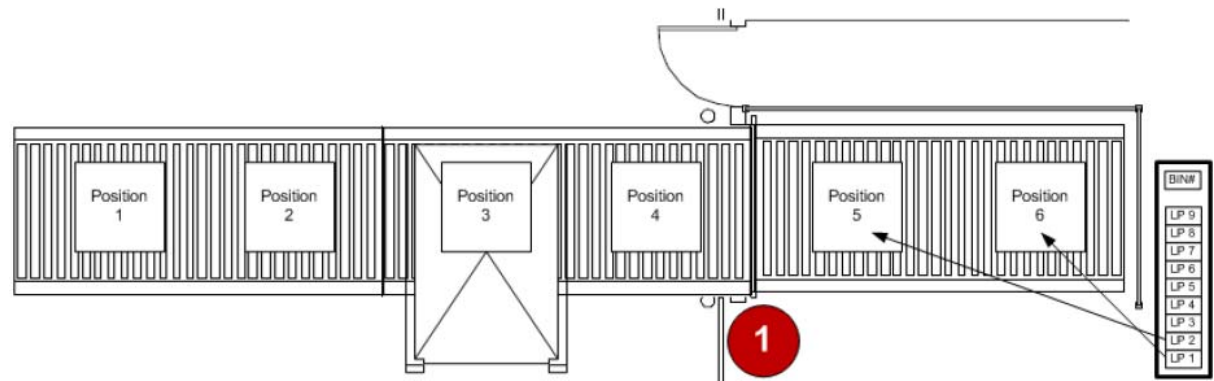
- ◆ Technology is a means to the end, not the end itself
- ◆ Leverage best practices, proven processes with appropriate technology to provide mission critical process visibility
- ◆ Risk mitigation - Proven methodology to optimize implementation success and minimize risk
- ◆ Provide actionable business intelligence
- ◆ Phased approach
 - Clear, crisp objective and scope
 - Measurable results
 - Minimized up front costs
 - No need to “boil the ocean”

People, Process & Technology

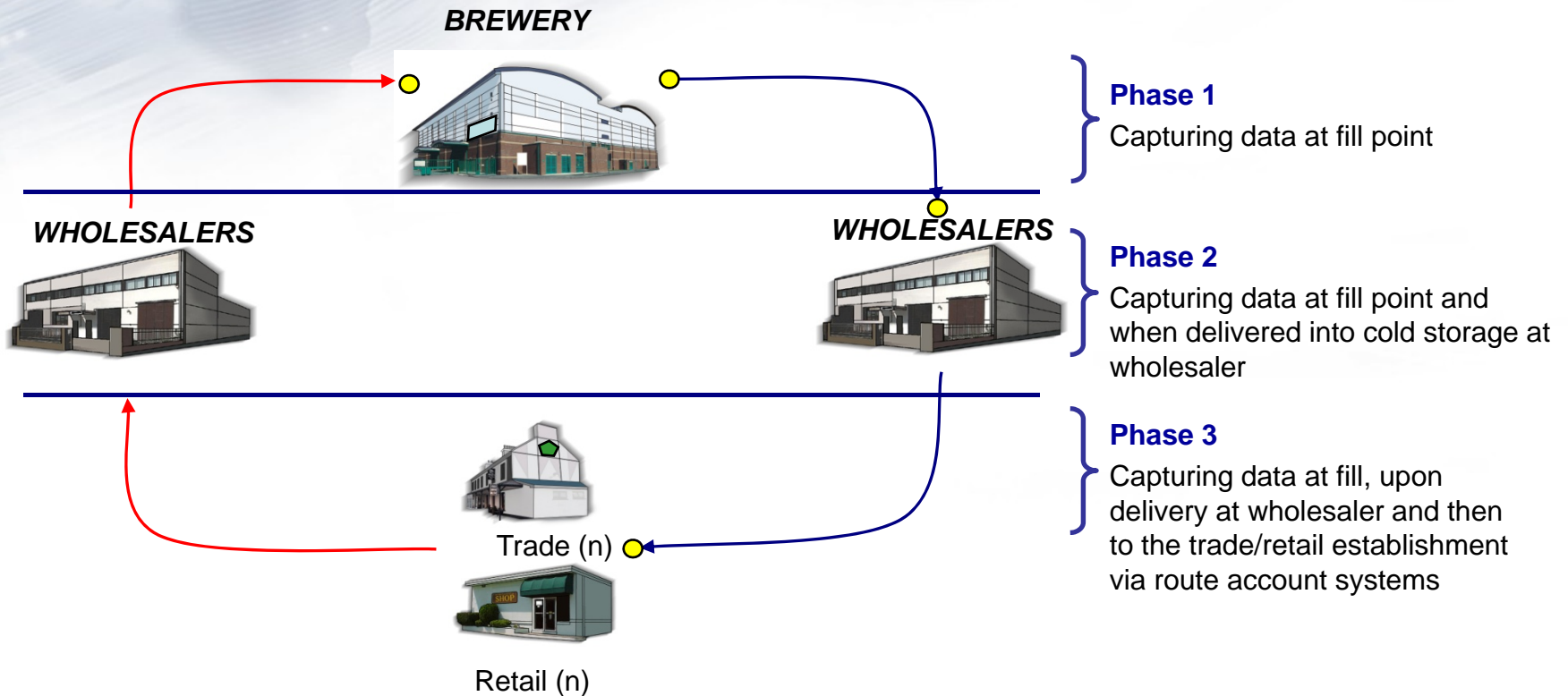
- ◆ Physical Process Flow – How kegs move through brewery
- ◆ Logical Process Flow – Brewer's operational processes
- ◆ Assess brewery infrastructure
 - ◆ ERP
 - ◆ WMS
 - ◆ Environmental constraints / physics
- ◆ Rapid prototyping / independent 3rd party testing
- ◆ Selecting appropriate technology
- ◆ Implementation

Risk Mitigation

- ◆ Early 2007 – Testing of GEN2 RFID technology at Sun APT
 - Accelerated Lifecycle Testing
 - Portal Testing
 - RFID Tag Environmental Testing
- ◆ Site evaluation
 - Spectrographic analysis



Phased Approach to Keg Utilization



- Flow of Full Kegs
- Flow of Empty Kegs
- RFID Data Capture Point

Phase 1 – Fill to Fill Data

BREWERY



- ◆ Identify a statistically significant sample size, representative of entire keg fleet
- ◆ Attach RFID tags to kegs in sample fleet
- ◆ Read RFID tags on keg line post fill



- ◆ Establish cycle time metrics
 - Average cycle time by size
 - Average cycle time by product
- ◆ Improve fleet visibility
- ◆ Results are projectable to entire fleet

Phase 2 - Two Tier Visibility

BREWERY



- ◆ Identify a statistically significant sample size, representative of entire keg fleet
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- ◆ Read RFID tags on keg line post fill



- ◆ Establish cycle time metrics
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WHOLESALER

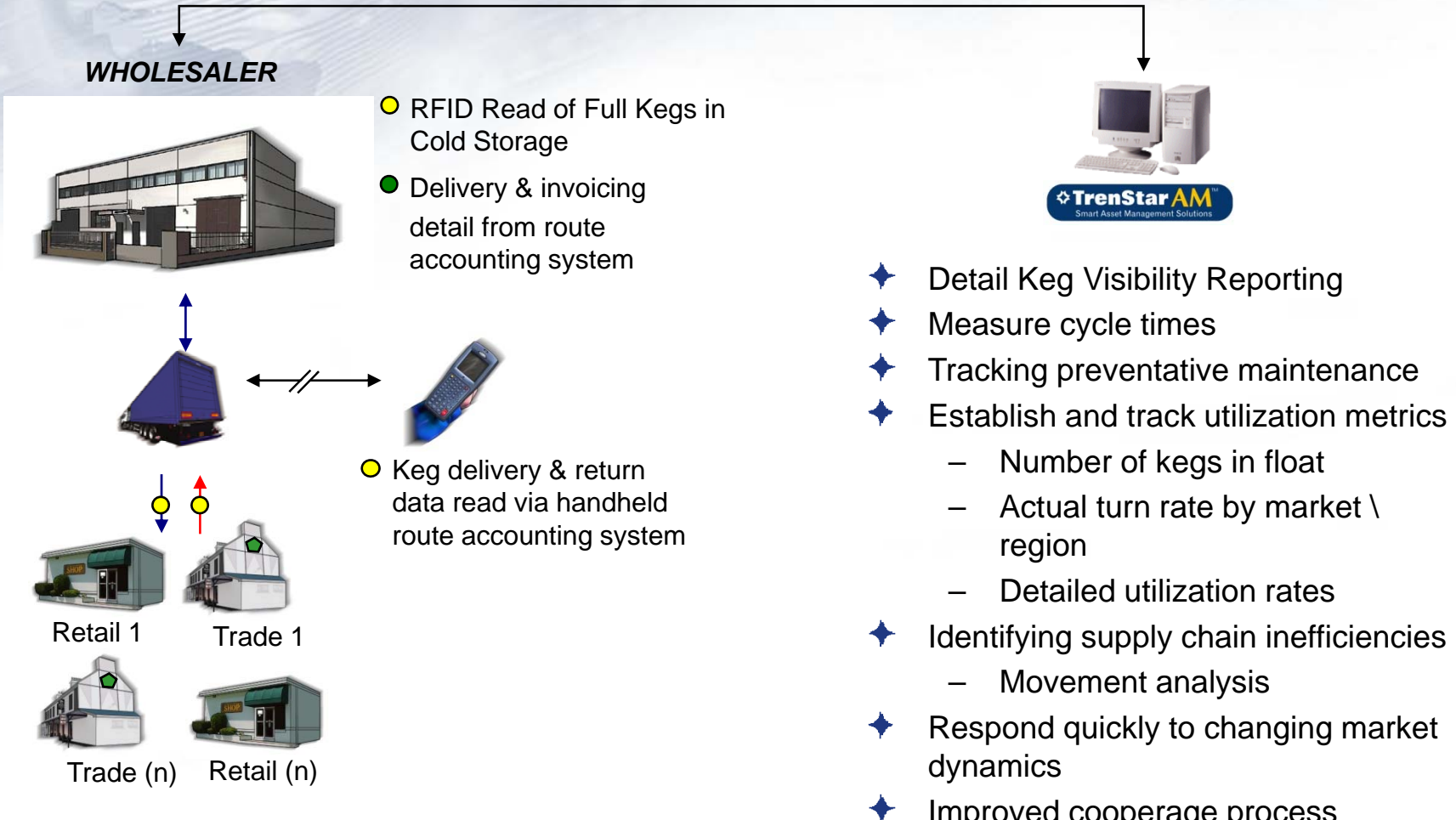


- ◆ RFID enable cold storage portal
- ◆ Read kegs / pallets upon delivery



- ◆ Measure cycle time by wholesaler / region
 - Average cycle time by size
 - Average cycle time by product
- ◆ Tier Two Visibility

Phase 3 - Three Tier Visibility

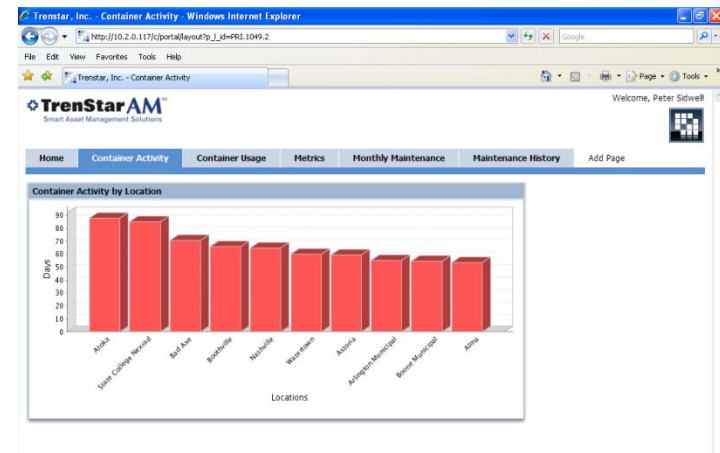


Benefits

- ◆ Quantitative approach
 - Randomized sampling of keg fleet
 - Results are projectable to entire fleet
- ◆ Measurable results
- ◆ Clear objective and scope
- ◆ Minimized up front costs
- ◆ Phased approach
 - Add RFID read points for greater granularity
 - No need to “boil the ocean”



- ◆ Web-based solution for gathering asset data: including contents, location, status, billing and preventative maintenance
- ◆ TrenStarAMTM (Asset Management) provide companies with improved visibility, movement analysis reporting, and process alerts, that guide the enterprise in effectively managing their asset and optimizing their supply chain dynamics
- ◆ Leveraging commercially available GEN2, EPC compliant RFID technology and asset tracking best practices
- ◆ Integrates with ERP systems such as SAP and Oracle
- ◆ Data collection using mobile and fixed equipment (device independent)



Questions & Answers