

SUPPLY CHAIN MANAGEMENT Executive Study Group





Center for Supply Chain Innovation

#### Traceability Capability in Foodservice: NRA Survey Results

Survey of foodservice chain operators, conducted Aug-Sep 2017

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## Traceability defined

Traceability is the ability to verify sources and locations of product. It involves each trading partner collecting and maintaining product information that supports batch/lot or serial number visibility of the product's movement through the distribution channel.

- Three levels of traceability:
  - Internal traceability enables a business to link its *internal process information* to a unique product number, a batch/lot or serial number, and relevant dates (production date, best by date, etc.).
  - <u>External traceability</u> communicates product identity, batch/lot or serial number, and relevant dates with transport information *between trading partners*, at least one level up and one level down the distribution channel.
  - <u>End-to-end traceability</u> enables supply chain partners to identify automatically the direct source and direct recipient of specific traceable items at the batch/lot or serialized (item) levels *from source supplier to point of consumption (e.g., restaurant)*.



## Key Findings: Traceability Capabilities

- Operators say they have better "External Traceability" than "Internal Traceability"
  - 73% report that they can verify sources and locations of most or all items at batch/lot serial number level with trading partners, while only 50% say they can verify this data for most or all items in their own locations
  - Few operators (16%) manage their own traceability data
  - Only 43% indicate they have "end-to-end" traceability for most or all items.
- Larger chain operators report better traceability capabilities
  - 90% of large chain operators (5000+ locations) report both internal and external lot-level traceability for most or all items
  - 70-75% of medium and small chain operators report external traceability for most or all items, and only 50-60% report internal traceability for most or all items
- Over 90% of operators say they can acquire traceability information within 24 hours; 55% can acquire in less than 4 hours



## Key Findings: Traceability Platforms and Tools

- More than 80% of operators utilize existing manufacturer or distributor systems (less than 20% using proprietary systems)
- Only 43% of operators indicate that they use barcodes at case levels or with lot/batch information
  - Large operators are more than twice as likely to use barcodes than medium or small operators
  - 60-70% of barcode users scan in-bound to distributor and in-bound to operator
  - Only 9% of barcode users scan within restaurants
- Only 26% of operators indicate that they are using GS1 standards
  - Large operators are more than three times as likely to use GS1 than medium or small operators
  - GS1 adopters report that about half of their trading partners use GTINs (56%) and GLNs (41%), and about half of their products and systems utilize GS1-128 barcodes
- Only 9% of operators are using GLNs for their locations. 45% indicate they are planning to use
  - None of the small operators indicate that they are using GLNs



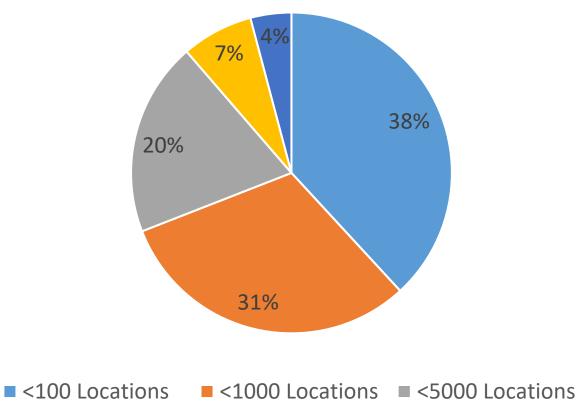
## Sample of 101 respondents, including:

99 Restaurant & Pub	Captain D's	Green Chef Corporation	Nando's	Saladworks	Tropical Smoothie
A&W	Centralized Supply Chain Services, LLC	Happy Joe's	National DCP	Sizzler	University of Notre Dame
American's Navy	Chick-fil-a	Hersheypark	Nordstrom	SMG world	Wendy's Supply Chain Co-op, Inc.
Arby's	CKE Restaurants	IHG	Pizza Luce	Teriyaki Madness	Wienerschnitzel
Bent Tree Country Club	Denny's	Independent Purchasing Cooperative	Real Mex Restaurants	The Cheesecake Factory	Wood Ranch
Brinker International	Fairmont	Ledo Pizza	Rubio's	Toppers	Zaxby's
Café Rio	Focus Brands	Lineage Logistics	Ruth's Hospitality Group	Torchy's Tacos	



# Sample includes a mix of small, medium, and large chains

Number of Store Locations (Sample N = 101 Chains)





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## What are the goals of your current strategy or approach to traceability?

- Common themes:
  - Managing safety
  - Verifying sources, quality, locations
  - Accuracy and speed
  - GS1 implementation
  - Tracking from farm to table
  - 100% traceability
  - Vendor contact and control

Farm To Table Transparency Location Scanning Identify Insurance Efficiency Accuracy Accountability Sanitation Ingredients Distributor Manufacturer Principle Cost Supply Capability Access Proprietary Compliant Lot Code <sub>ROI</sub> Recall Temperature Food Traceability Source Safety Problems Complete Awareness Material Partner Control Focus Customer Improve Chain Perishable Implementation Automation Speed Visibility Integrity Data Origin Vendor Delivery Supplier Restaurant Properties GS1 Condition Quality



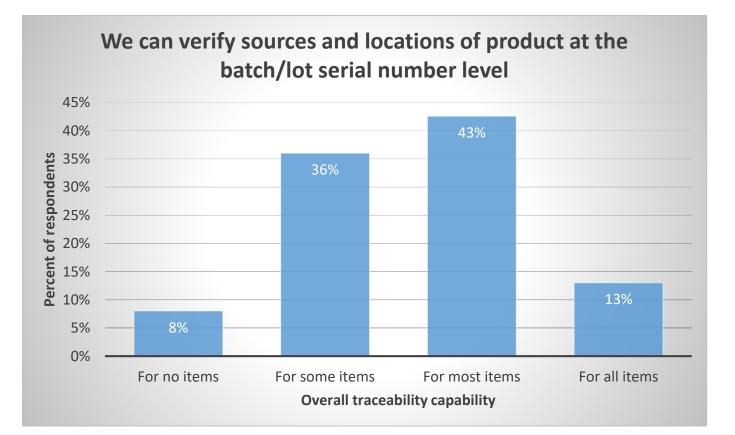
# What is the biggest challenge you face in trying to achieve the traceability you need?

- Common themes:
  - Getting supplier/distributor investment and compliance
  - Justifying and controlling costs
  - Adopting standards and uniform systems
  - Getting the right people and tools

```
Technology
Frompt Response
                      Information
  Scanning Cost People
   Uniformity
       Tracking
                       Inventory
         Coding Space Limitations
 Justification
              Support
  Substitutions Accuracy
            Compliance
```

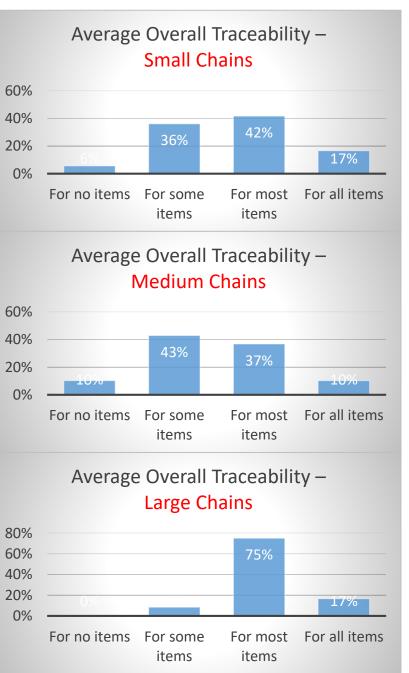


## Traceability capability

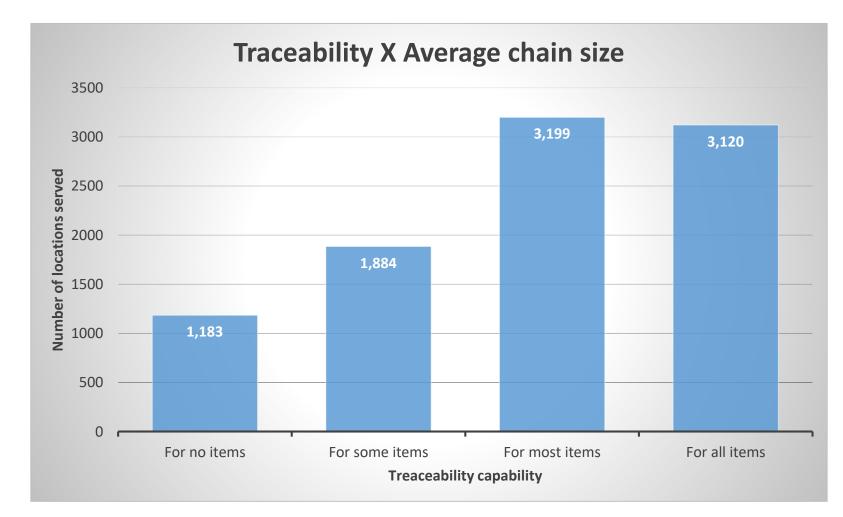


Small Chains (<100 locations), Medium Chains (200 – 5000 locations), and Large Chains (>5000 locations)



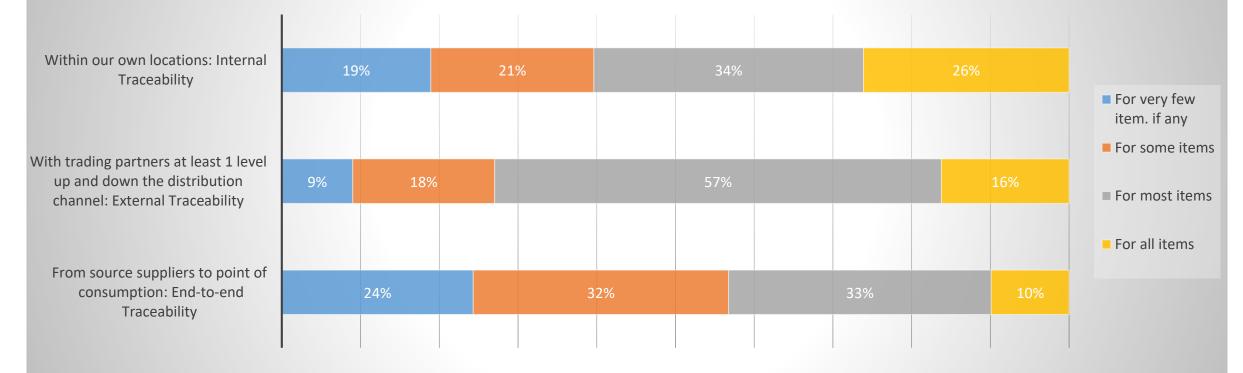


## Threshold effect for traceability

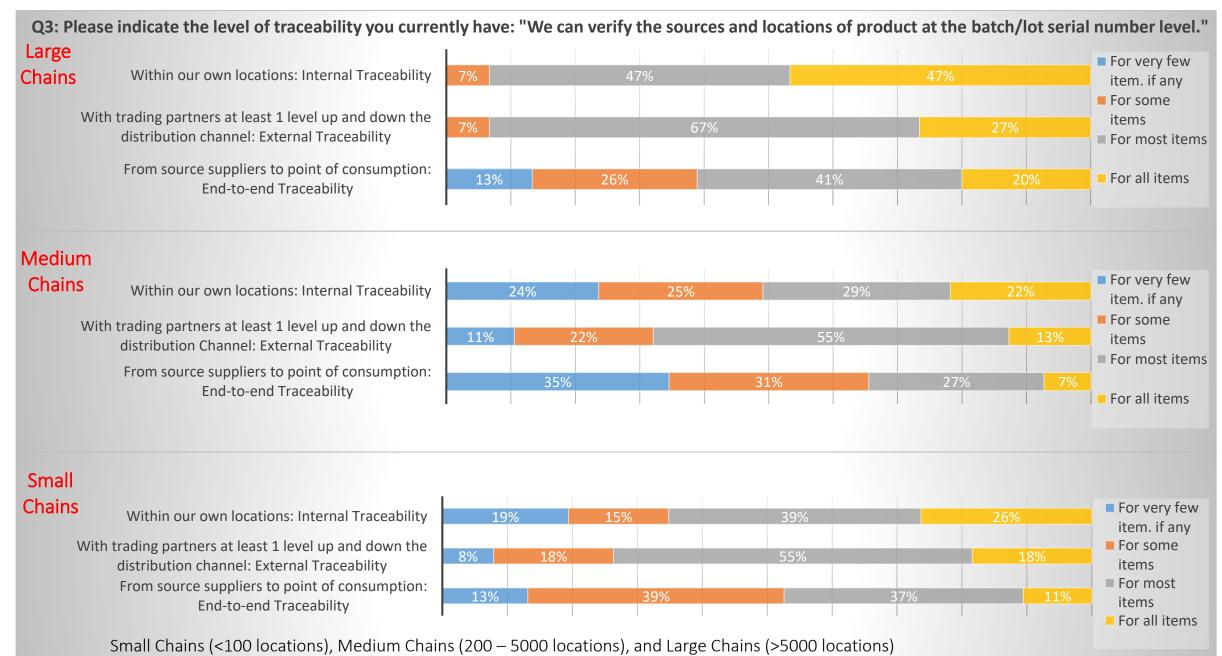


#### Internal vs external vs end-to-end traceability

#### Q3: Please indicate the level of traceability you currently have: "We can verify the sources and locations of product at the batch/lot serial number level."

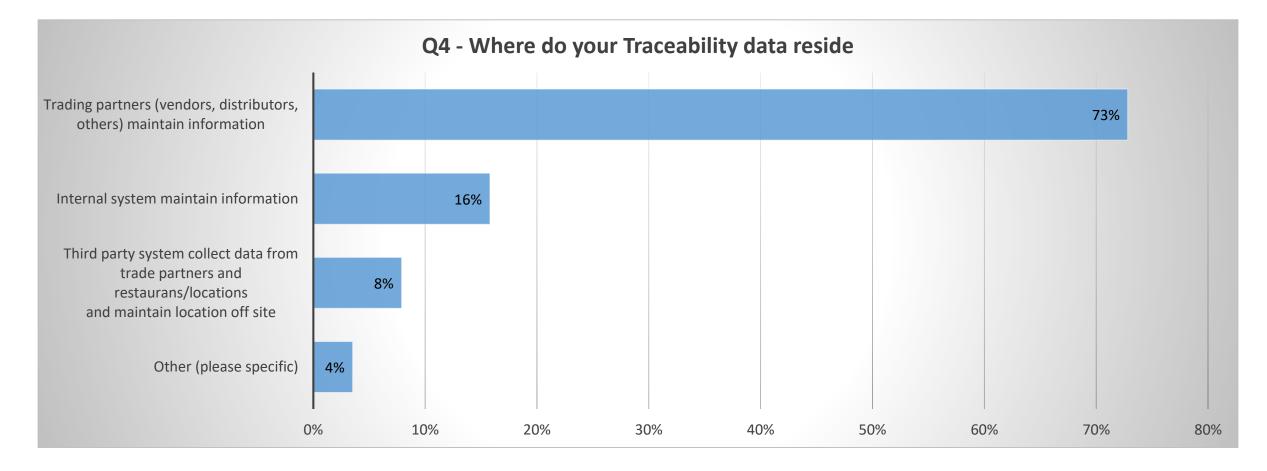






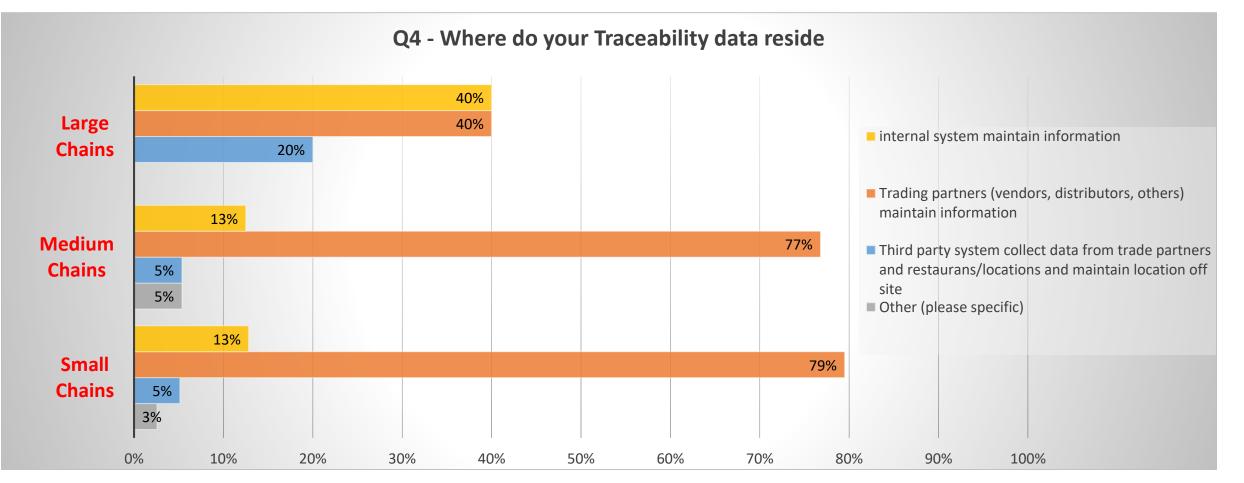
ASSOCIATION SCHOOL OF BUSINESS

#### Data are mostly maintained by partners





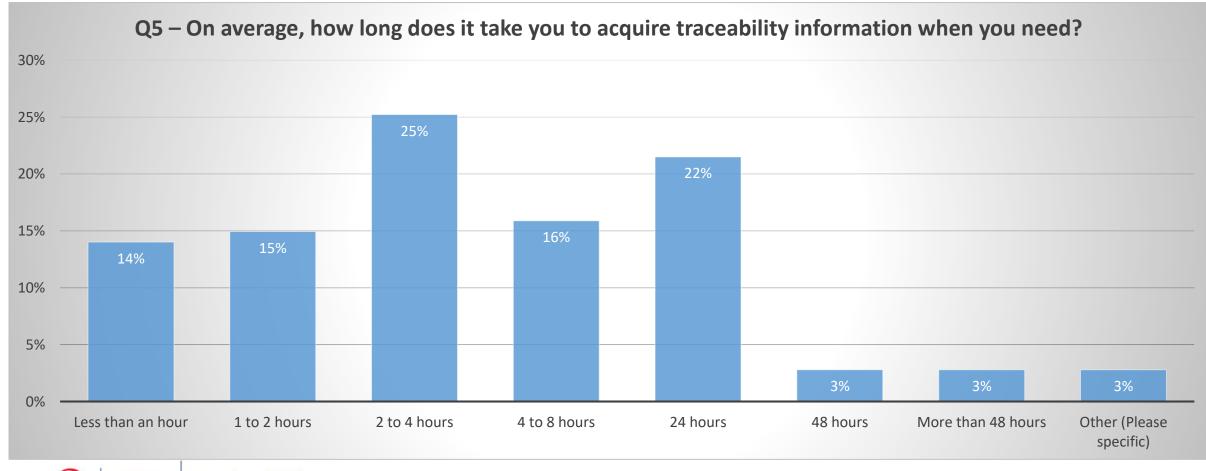
## Large chains more likely to maintain data along with partners



Small Chains (<100 locations), Medium Chains (200 – 5000 locations), and Large Chains (>5000 locations) SUPPLY CHAIN Neeley

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#### Most chains get trace data within one day



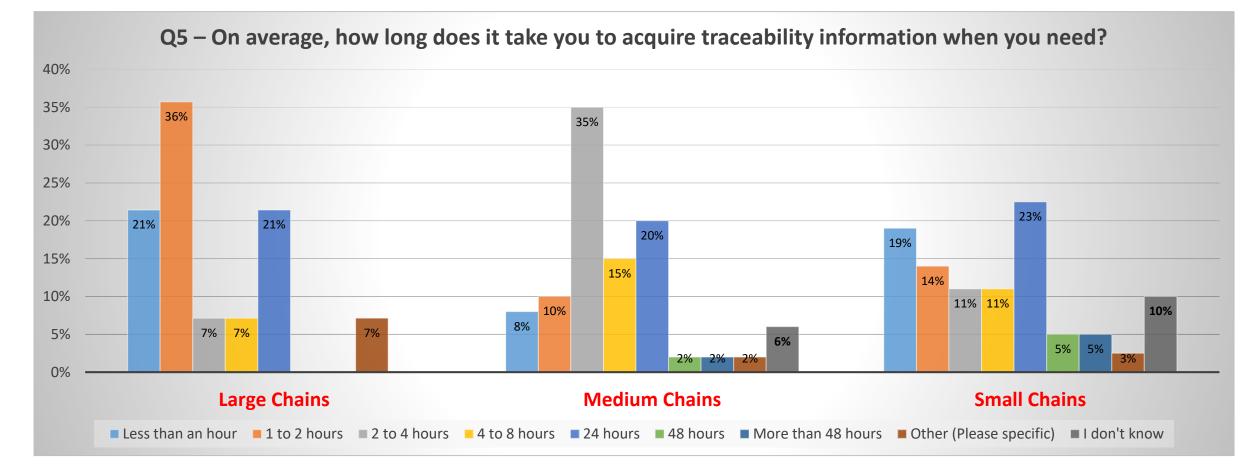
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RESTAURAN

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## Large chains report slightly faster access to information



Small Chains (<100 locations), Medium Chains (200 – 5000 locations), and Large Chains (>5000 locations) SUPPLY CHAIN Neeley

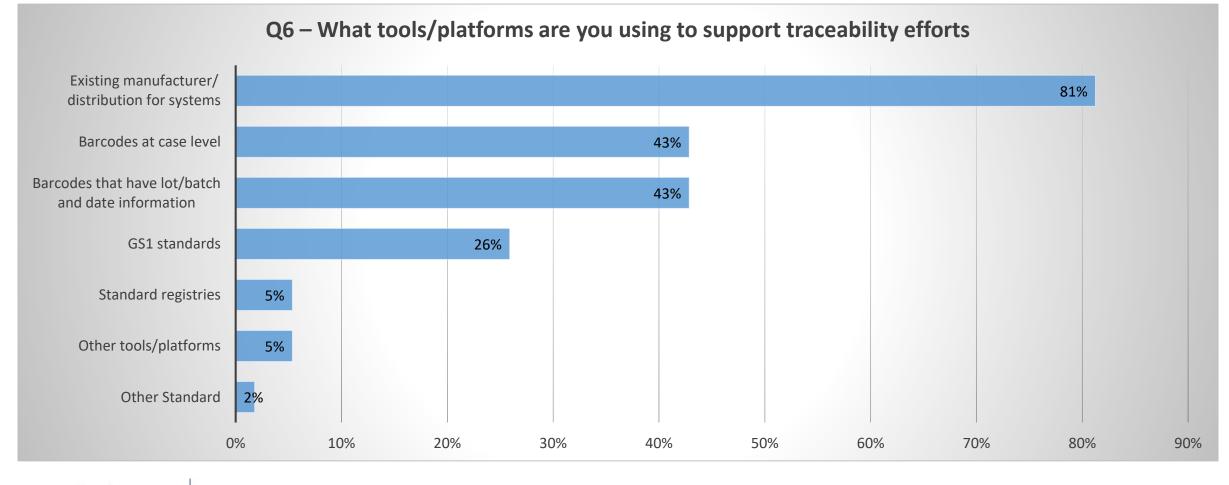
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#### Most chains rely on partner systems

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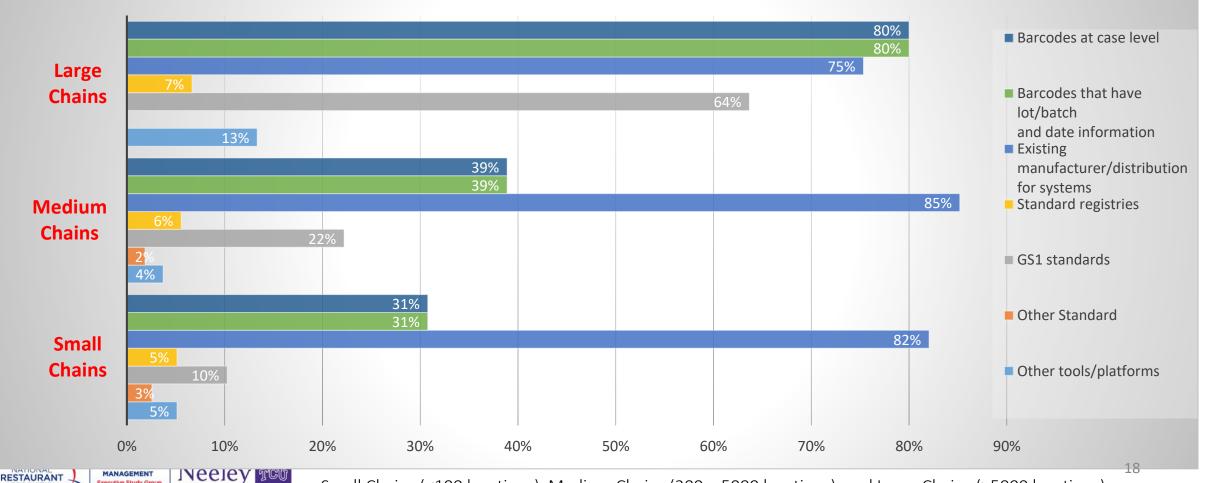


#### Large chains twice as likely to barcode

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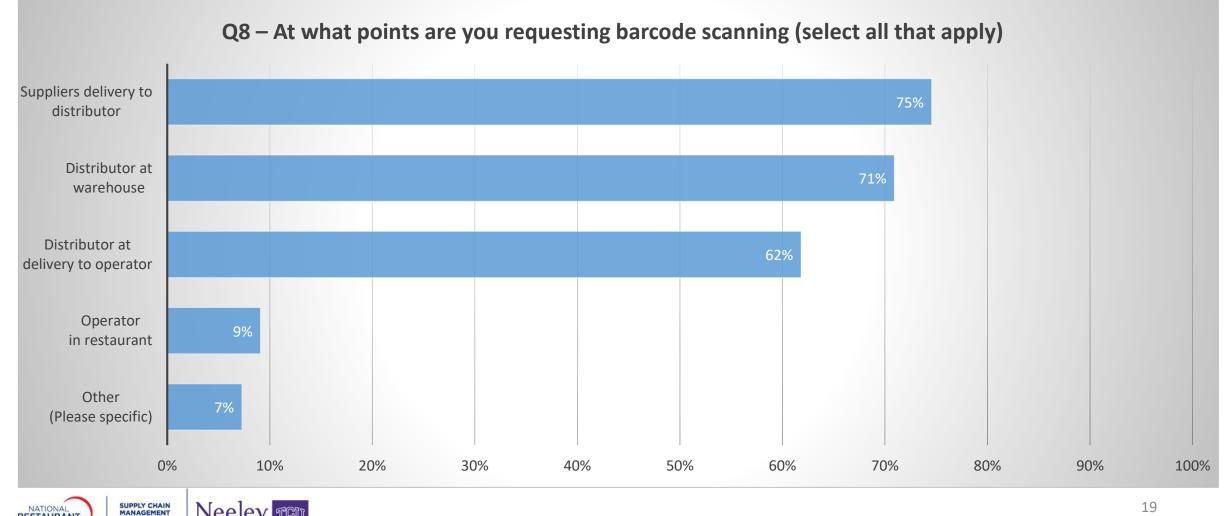
SCHOOL OF BUSINESS

Q6 – What tools/platforms are you using to support traceability efforts



Small Chains (<100 locations), Medium Chains (200 – 5000 locations), and Large Chains (>5000 locations)

## Barcoding occurs mostly in the upstream supply chain

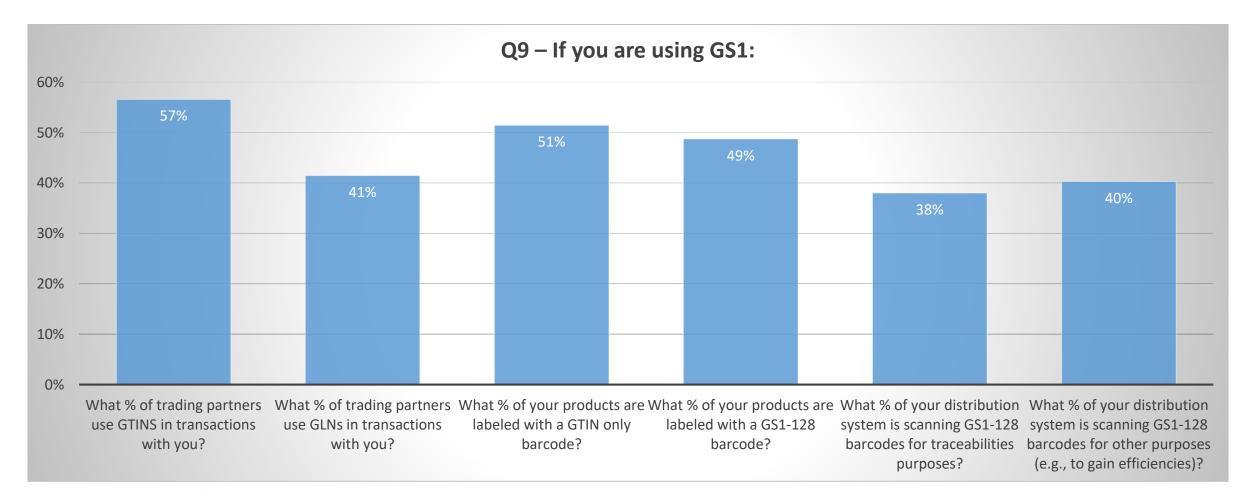


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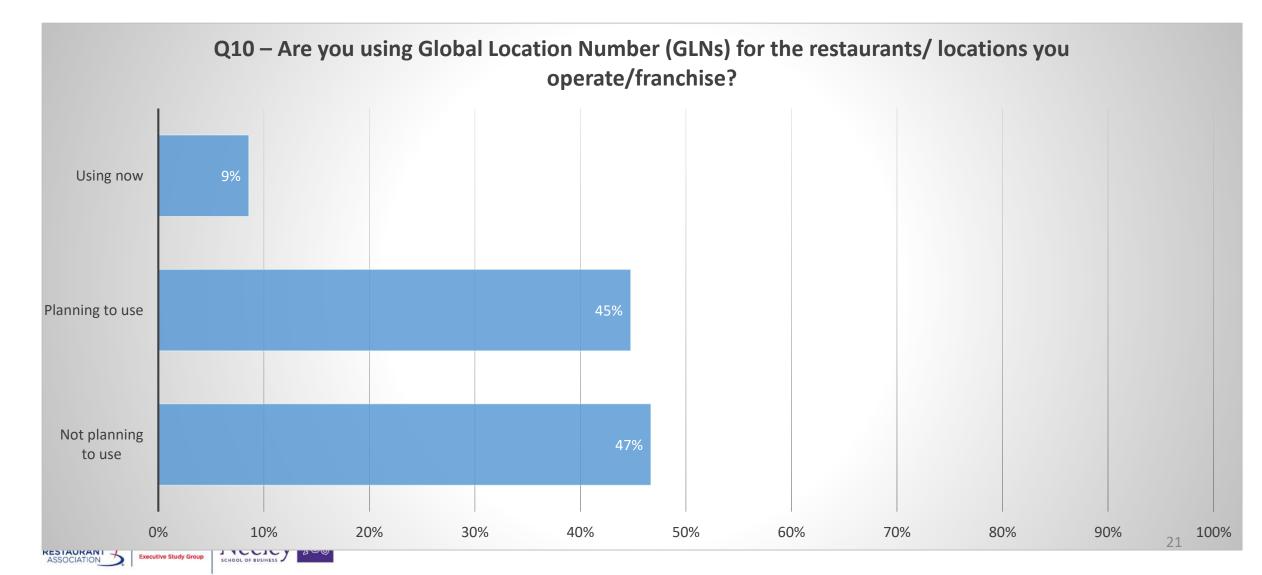
RESTAURAN

## About half of products/transactions using GTINs



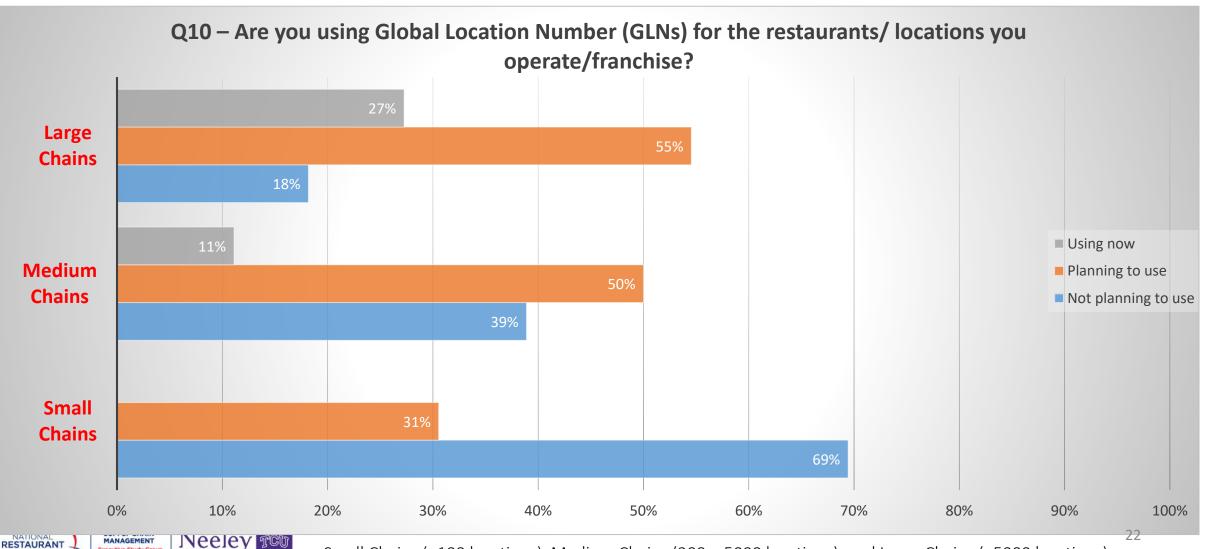


#### Less than half of chains using GLNs



#### Larger chains using GLNs more

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Small Chains (<100 locations), Medium Chains (200 – 5000 locations), and Large Chains (>5000 locations)

#### Most GLNs owned by chains

