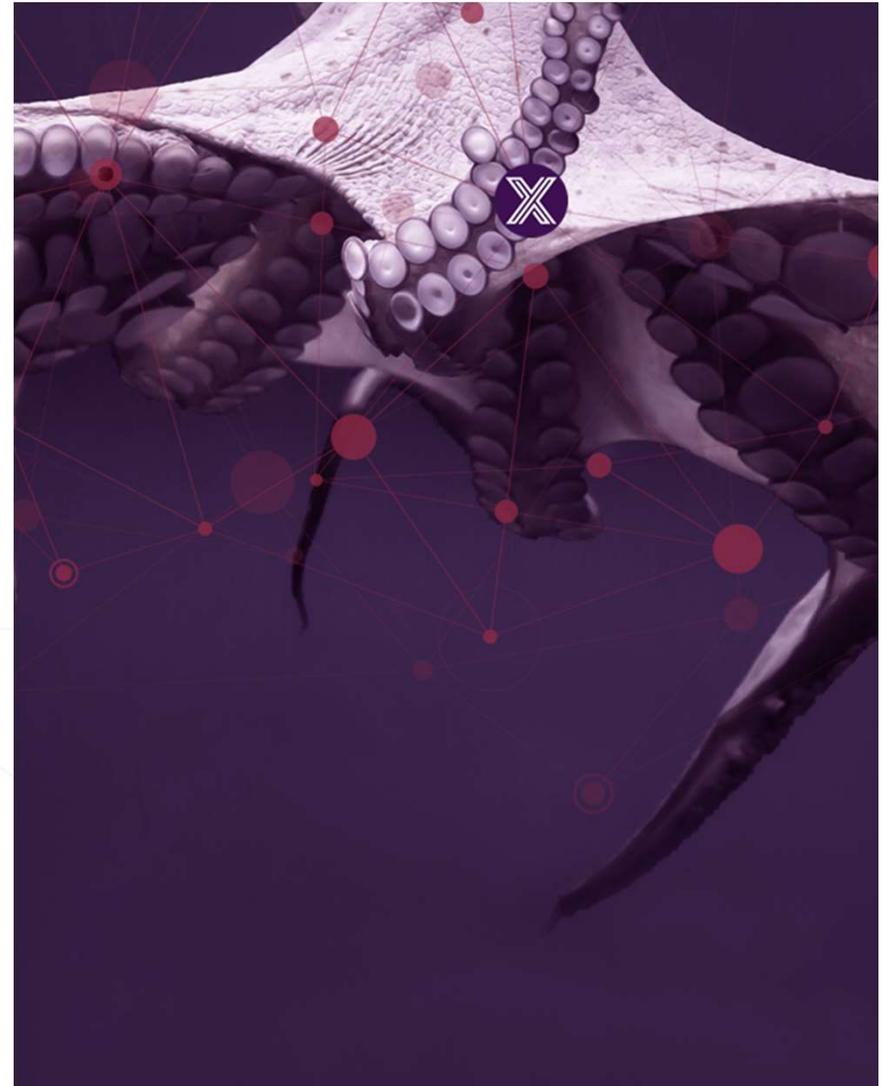# EDGE X FOUNDRY™

Vertical Solutions Working Group

May 12, 2020

Camilo Dennis (Intel) – camilo.a.dennis@intel.com
Henry Lau (HP) – henry.lau@hp.com

LF Antitrust Policy Notice

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Agenda

Conexxus - https://www.conexxus.org/**:**

- Initiatives with National Association of Convenience Stores (NACS)

- C-Stores Technology Standards

- C-Stores Use Cases

- Opportunities for EdgeX community to engage
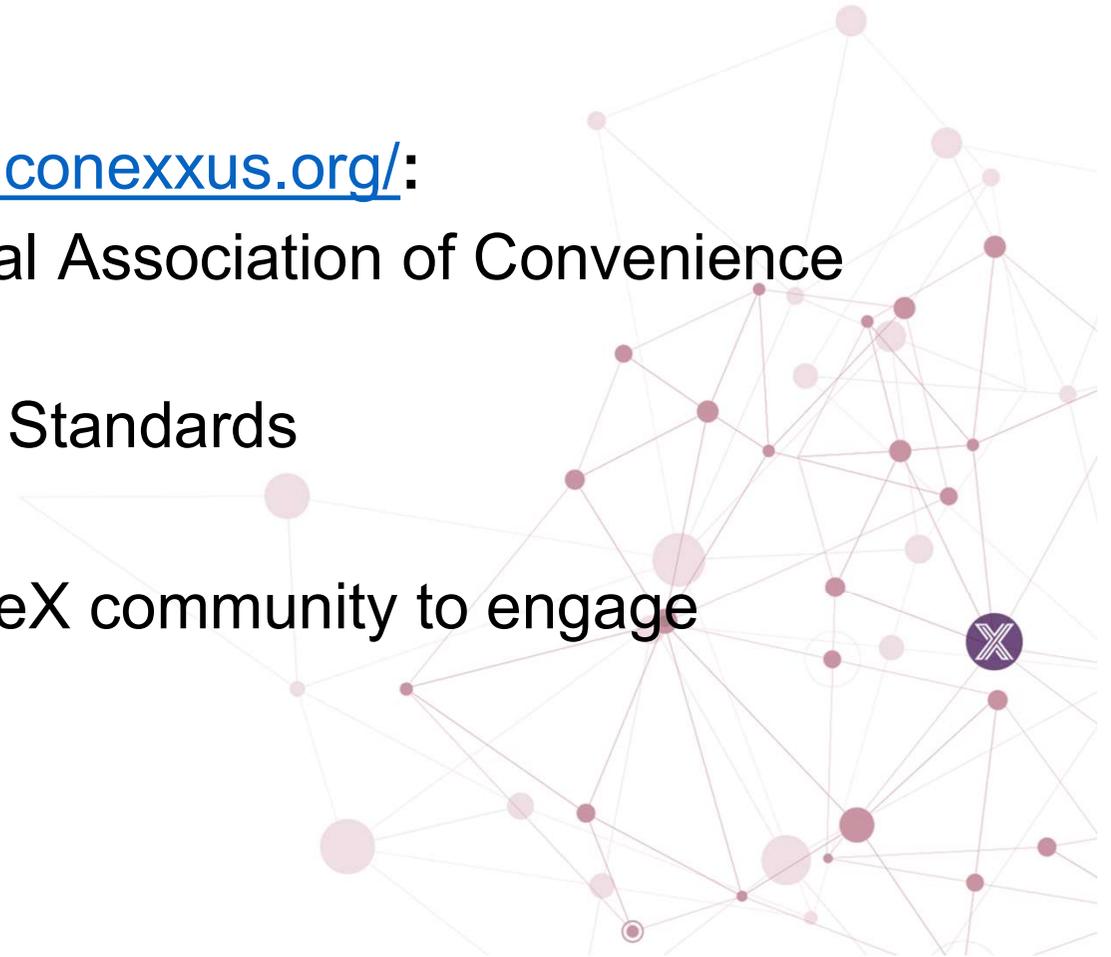
NACS and Conexxus:
Convenience Retail Perspective on IoT

Gray Taylor, Executive Director, Conexxus

David Ezell, Director of New Initiatives, Conexxus

May 12, 2020

CONEXXUS
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Agenda

- History of Conexxus & what we do
- Advocacy
- Current Standards portfolio
- Creating an API Ecosystem
- Alliance with NACS
- Importance of IoT

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Conexxus History

1995
Technology
Standards Project

2003
PCATS

2014
Conexxus Rebrand

Conexxus

- ✓ Not for profit
- ✓ Neutral forum with Anti-Trust and IP policies
- ✓ 190+ member companies who have an equal say regardless of size
  - Retailers
  - Suppliers
 - Associations
  - State Associations

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A Strong Technology Partner…

- ## We are independent & non-profit…
  – Expert volunteers, shaping the industry
- ## We set standards…
  – Data exchange, security, payments
- ## We provide clarity…
  – Emerging tech/trends; identifying & educating
- ## We advocate for our industry…
  – Open standards, innovation & competition
  – Technology is policy
- ## We improve profitability

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Representing the Industry…

- Conexxus technical advocacy
  - Identifies relevant standards & specifications
  - Engages with broad-industry "regulators"
  - Represents our industry anywhere needed
  - Ensurs fair and competitive landscape
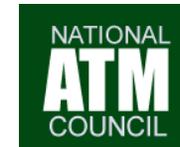
…and Educating the Industry

- Webinars (webinars@conexxus.org)
- White Papers
- WeCare Program
- Annual Conference
- Tech Edge @ NACS Show
- Tech Research
- Field Trips

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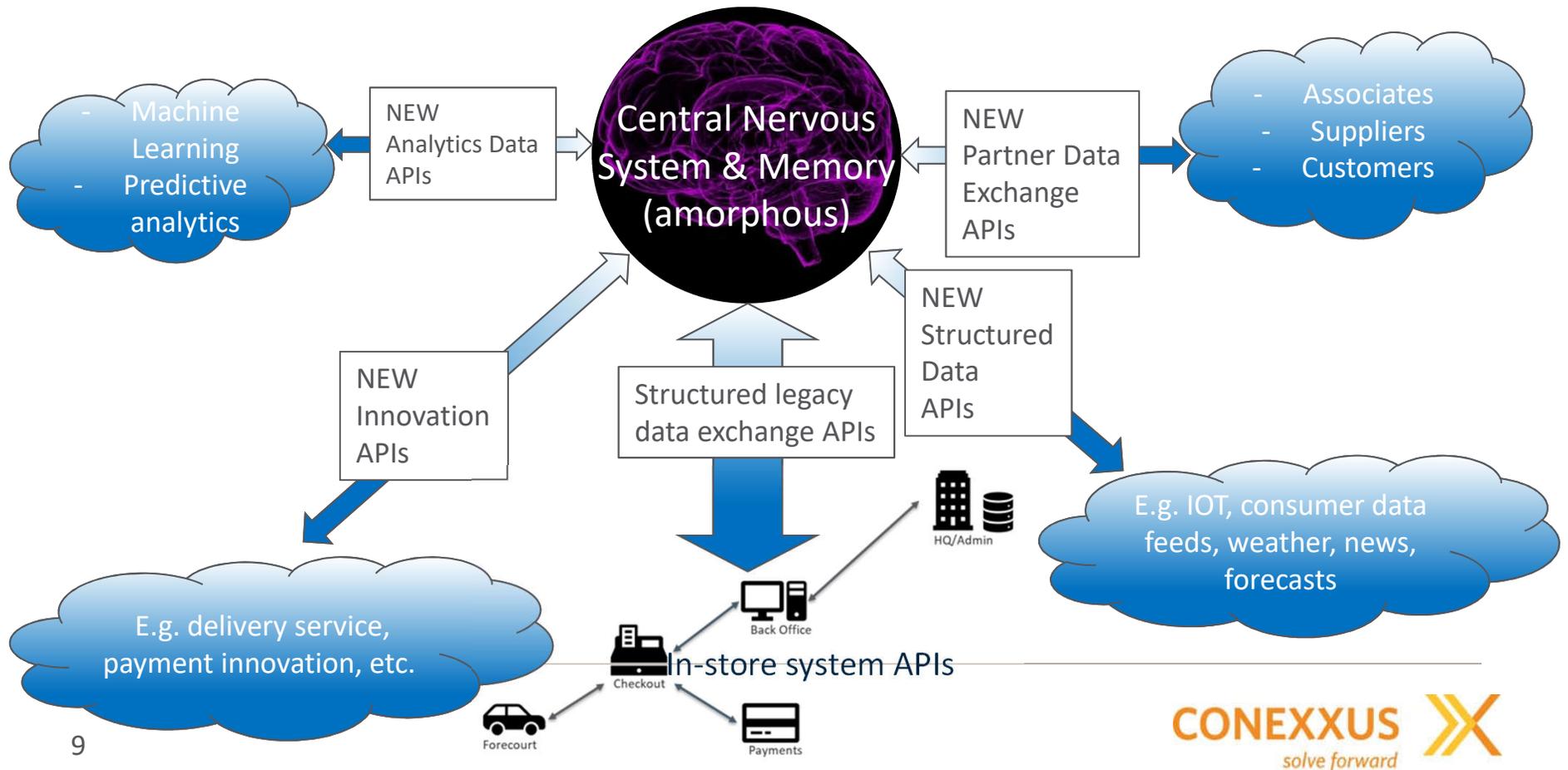
Active Committees

Business Committees

- Retailer Business Requirements
  - API Focus Work Group
- Membership & Marketing
- Technology Research Committee
- Standards Quality Assurance
- Technical Advisory Committee

Technical Committees

- POS/Back Office
- Device Integration
- EB2B
- Retail Financial Transactions
- Data Security

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Rewiring the Enterprise = Reducing Tech Debt

Central Nervous System & Memory (amorphous)

- Machine Learning
- Predictive analytics

NEW Analytics Data APIs

NEW Partner Data Exchange APIs

- Associates
- Suppliers
- Customers

NEW Innovation APIs

Structured legacy data exchange APIs

NEW Structured Data APIs

E.g. delivery service, payment innovation, etc.

E.g. IOT, consumer data feeds, weather, news, forecasts

HQ/Admin

Back Office

Checkout

In-store system APIs

Forecourt

Payments

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Active API Work

1. POS/Back Office (NAXML)
   - ✓ Food Service
   - ✓ Cloud POS Calculation APIs
2. EB2B
   - ✓ Retail Merchandise
   - ✓ Lottery
   - ✓ Motor Fuels
   - ✓ New opportunities exist here!
3. Data Security
   - ✓ Security Advisory WG
4. Device Integration
   - ✓ Site Asset
   - ✓ Forecourt Device Controller
   - ✓ Car Wash
   - ✓ **IoT**
   - ✓ Intelligent Cash Drawer

5. Retail Financial Transactions
   - ✓ Mobile
   - ✓ Loyalty
   - ✓ Digital Offers
   - ✓ EPS
   - ✓ P2PE
   - ✓ Payment System Product Codes
   - ✓ EMV Support
   - ✓ EMV Fleet
   - ✓ Gift Cards

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Open Retailing

- ✓ Global Collaboration between Conexxus & IFSF
- ✓ Home for Global Standards
- ✓ Data dictionary – Draft 0.1 – Seeking industry feedback
- ✓ APIs Guidelines – Published – Feedback Welcome
  - • JSON
  - • Transport
  - • Security
  - • OAS 3.0
- ✓ New standards…
- ✓ Updated versions of XML Standards…
- ✓ Incorporating new technology …

I ❤ APIs

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Alliance with NACS

- NACS represents 153,000 U.S. convenience stores
  - 600,000 global stores
- Powerful partnership with NACS
  - Helping shape public policy
  - Laser focused on industry success

NACS. Advancing Convenience & Fuel Retailing
convenience.org

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U.S. Convenience Market

- 153,000 stores
- 15% of retail locations
- Over 80% of transportation fuels
- 2.5M employed directly
- 17% of total retail sales (2017)
- Over 160M customers per day

Leading Merchandise Categories

Convenience Sees Share Erosion Four of Six Top Categories NACS.

Cigarettes OTP Beer Package Beverage Salty Snacks Candy
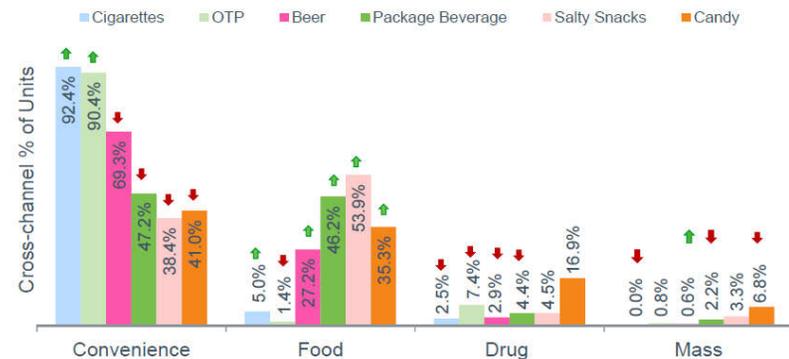
Source: Nielsen 52 Weeks Ending December 14, 2019.

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Strategic Headwinds

Annually, DSOE Growth is Basically Equal to Inside GP$ Growth but the DSOE Trend Line is a Concern

NACS.

Legend:
- Inside GP$
- DSOE
- Linear (Inside GP$)
- Linear (DSOE)

Source: NACS CSX Over Time 2018-2019

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Employees are Paid More, but are Less Productive

NACS.

Burdened Labor Cost per Hour — Up 12.4% Since 2015

Inside Sales per Labor Hour — Down 11.2% Since 2015
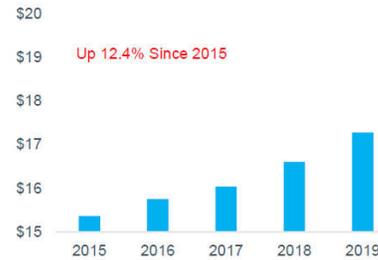
Source: NACS CSX Time Period Difference 2015-2019

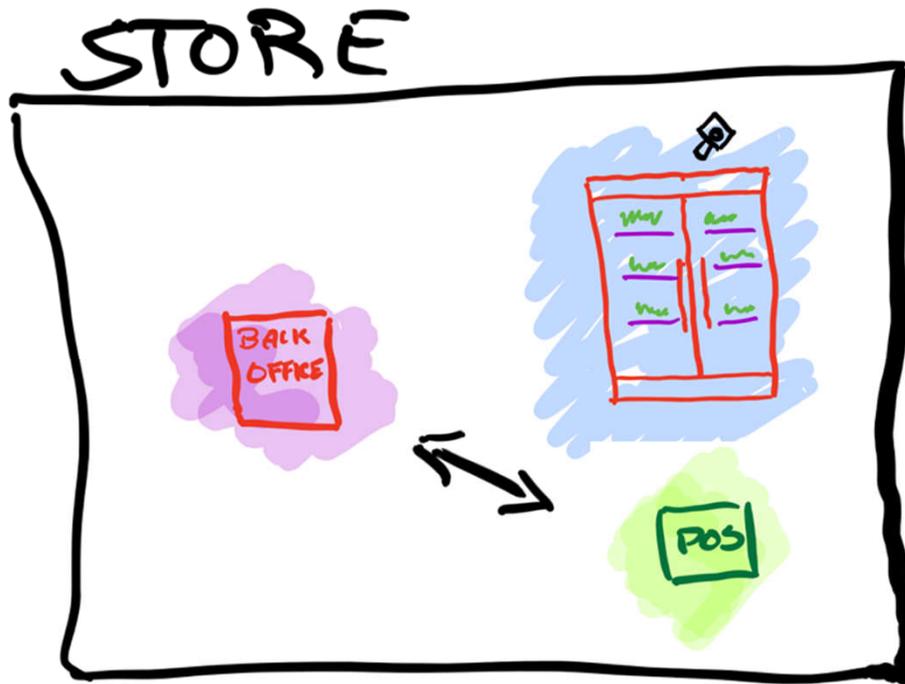©2020 NACS | Unauthorized Duplication Prohibited | Page 15

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Small Format Retail is Poised for Growth Over the Next Five Years

Size of Store in Gross Square Feet	Stores			Sales CAGR	
	2014	2019E	2024E	'14-19E	'19E-'24E
Less than 20,000	221,492	221,873	229,077	6.6%	0.0%
20,000 − 50,000	27,978	27,370	28,666	-0.4%	0.9%
50,000 − 100,000	12,119	10,993	11,255	-1.9%	0.5%
100,000 − 150,000	9,569	9,061	9,145	-1.1%	0.2%
Above 150,000	5,454	5,458	5,457	0.0%	0.0%
	276,612	274,761	283,647	-0.1%	0.6%

Source: Kantar Retail IQ

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Convenience
IoT Use Cases

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Convenience Environment

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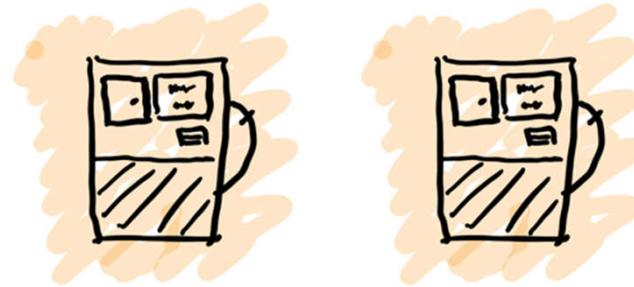
Target Use Case Categories

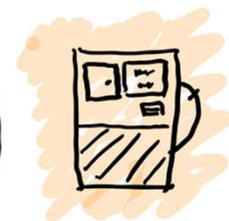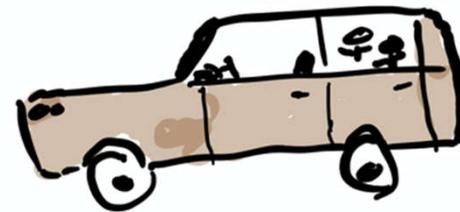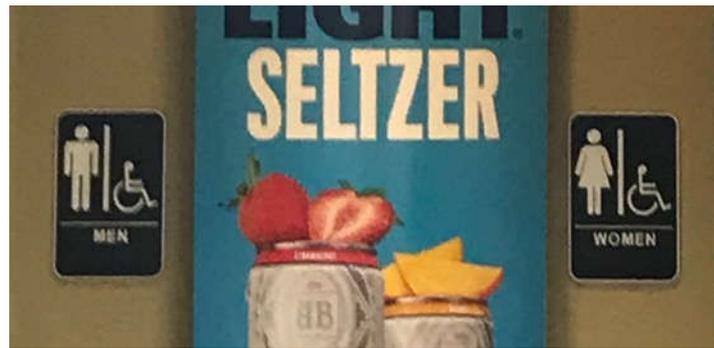| Inventory Management	Interactive Marketing	Site Security & Security	Edge Warehousing	Regulatory Compliance

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Site Security

The old "skimmer install behind the white van" trick, thwarted!

CONEXXUS
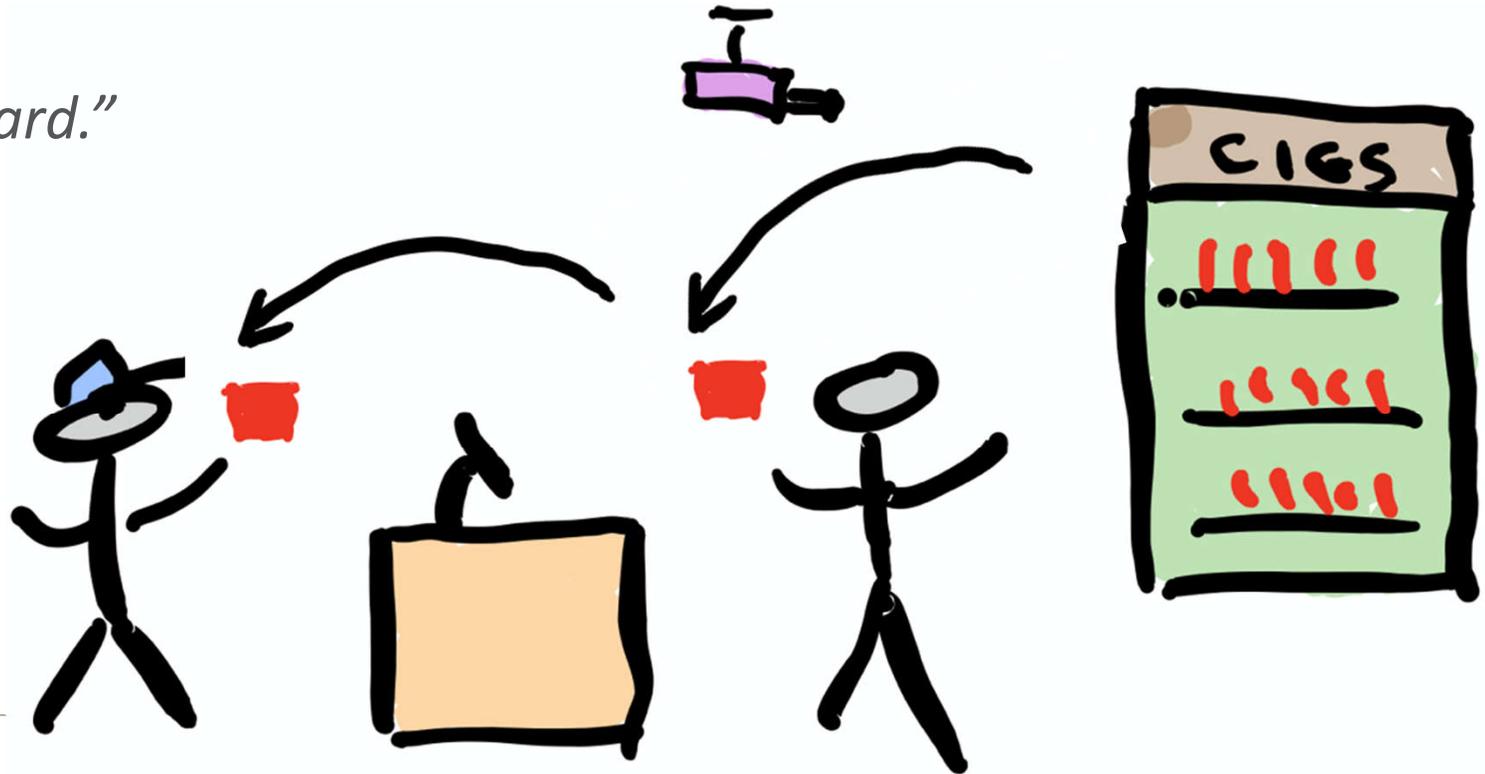*solve forward*
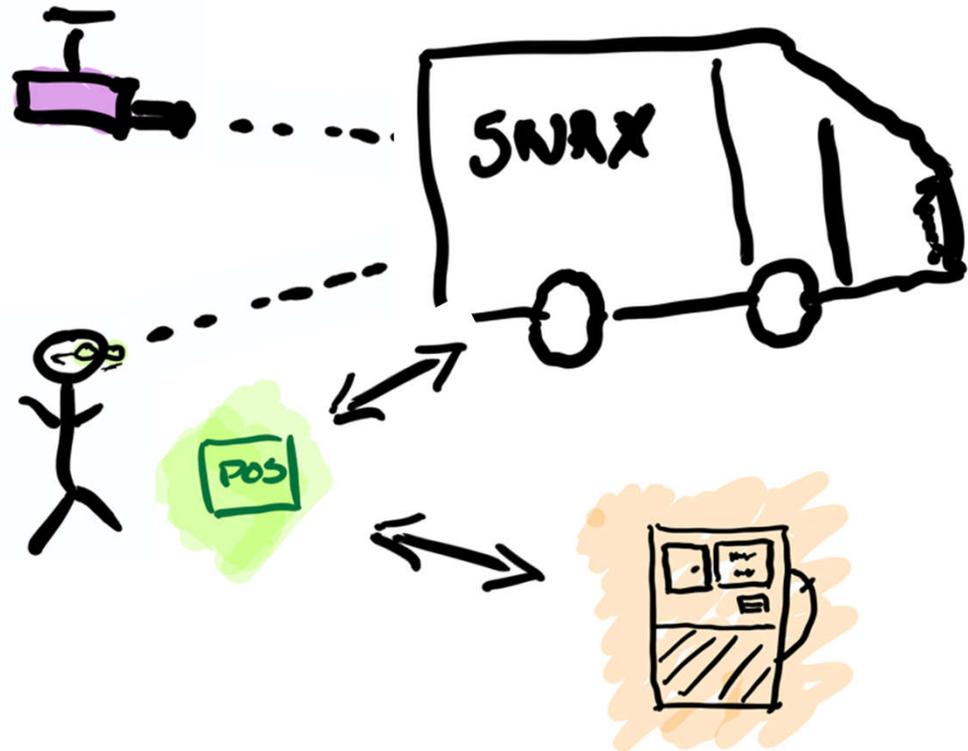
Security (Guest Safety)

The "Dad passes out in the bathroom" scenario.

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Regulatory Compliance

The "last yard."

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Sponsorship?

How can we get the brands to sponsor some of these use cases?

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David Ezell: dezell@conexxus.org

Website: www.conexxus.org

Twitter: @Conexxusonline

Conexxus LinkedIn Company Page: Conexxus.org

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Meeting Dial-in

Join Zoom Meeting

https://zoom.us/j/132889142 (
https://www.google.com/url?q=https%3A%2F%2Fzoom.us%2Fj%2F132889142&sa=D&ust=1552503732499000&usg=AFQjCNFjmtyftqtp3lCh2uhPNHHIp98TYw)

One tap mobile

+16699006833,,132889142# US (San Jose)

+16465588656,,132889142# US (New York)

Dial by your location

+1 669 900 6833 US (San Jose)
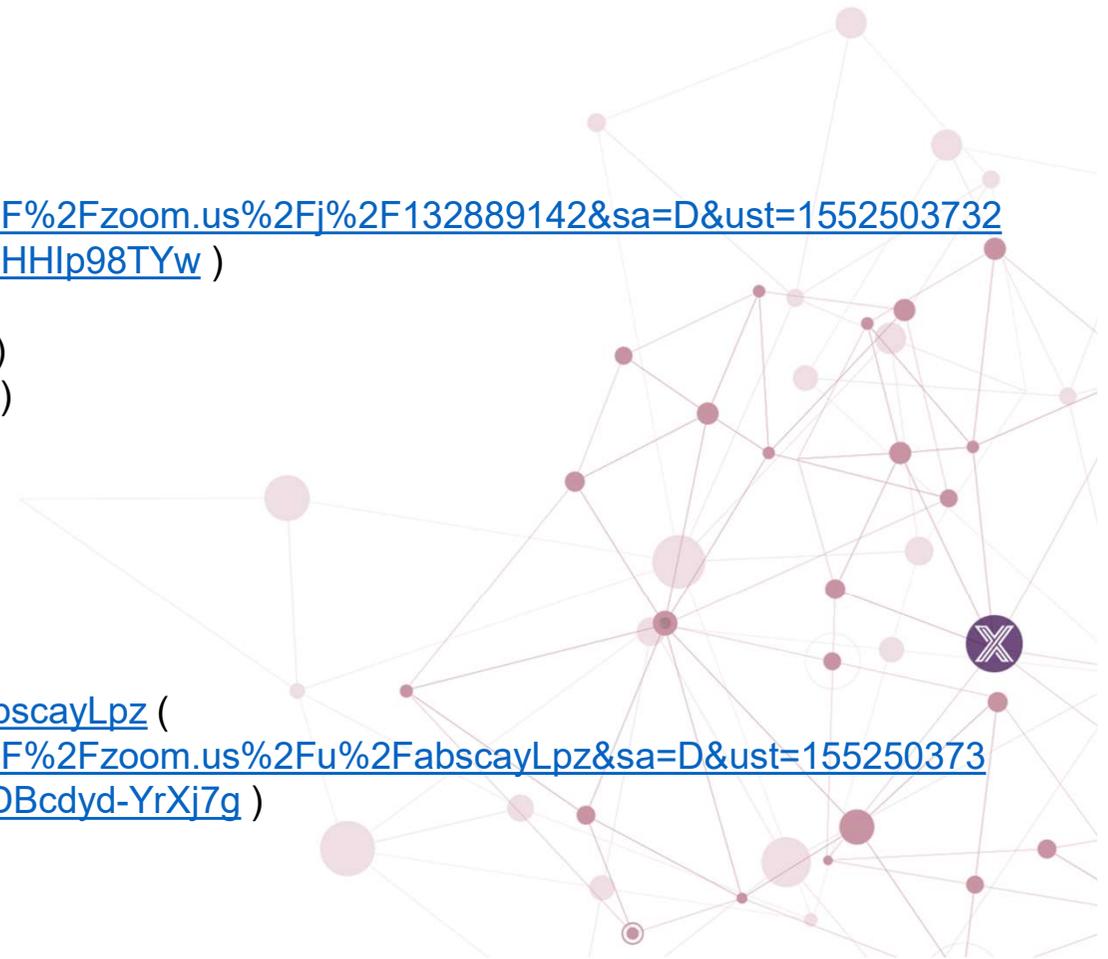
+1 646 558 8656 US (New York)

855 880 1246 US Toll-free

877 369 0926 US Toll-free

Meeting ID: 132 889 142

Find your local number: https://zoom.us/u/abscayLpz (
https://www.google.com/url?q=https%3A%2F%2Fzoom.us%2Fu%2FabscayLpz&sa=D&ust=1552503732499000&usg=AFQjCNEMKuQdf-1HfMXI0DBcdyd-YrXj7g)

Thank you

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