

### Before we start... here is a quick introduction



- Bahige El-Rayes
- Partner with A.T. Kearney Lead Food & Beverage efforts
- Speak English, French and Arabic fluently
- Live in New York avid Online shopper
- Pro-Bono work on Food Waste with Feeding America
- Mentor start ups in the New York area

### **A.T. Kearney Introduction**



**Tradition** – 90 Years of successful corporate impact; founded 1926 in Chicago

Revenues – approximately US\$1.1 billion; 90% repeated business

**Global Footprint** – 61 offices in 40 countries, over 2,300 consultants

**Global Business Policy Council** – community for thought leaders and policy makers

Marquee Clients – works with all leading players across a wide range of industries

**Consumer Goods and Retail** – leading practice within A.T. Kearney

Strategy Operations Technology

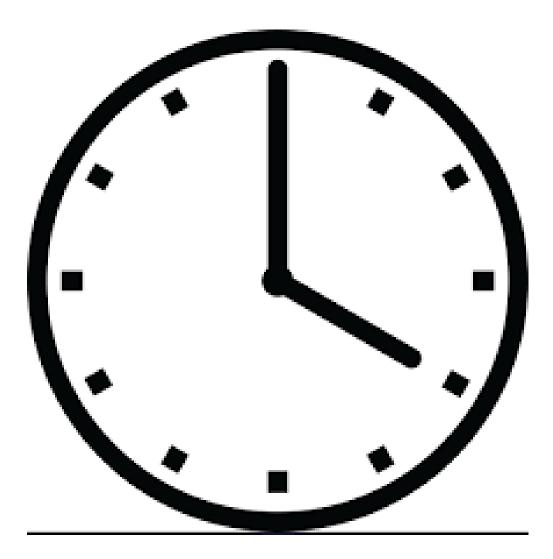
Organization & Transformation

- Clients first
- Tangible results not only reports
- Collaborative style joint teams with clients
- Quality and long-term relationships
- One firm no boundaries worldwide pool of experts

**Immediate Impact, Growing Advantage** 



At 4pm – 80% of US consumers don't know what they want to eat





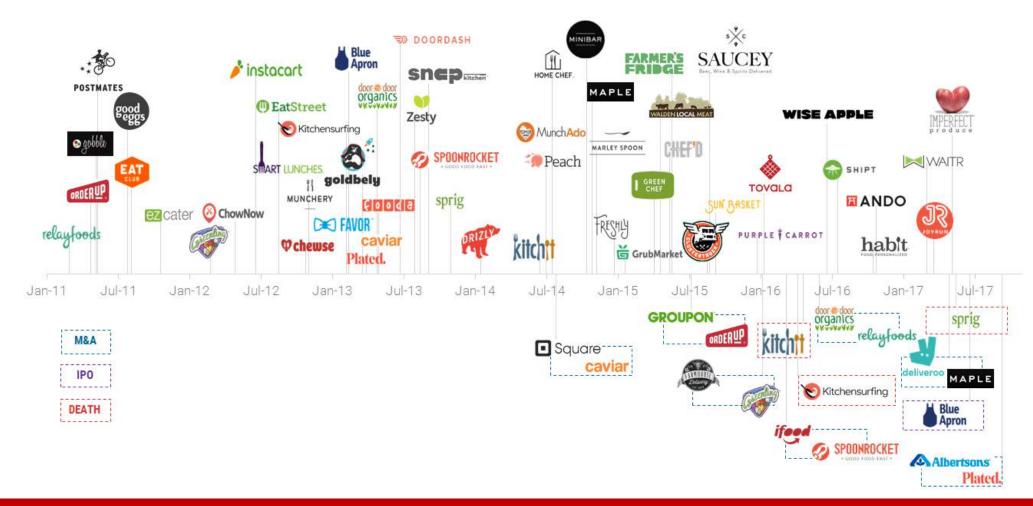
# Take Out!







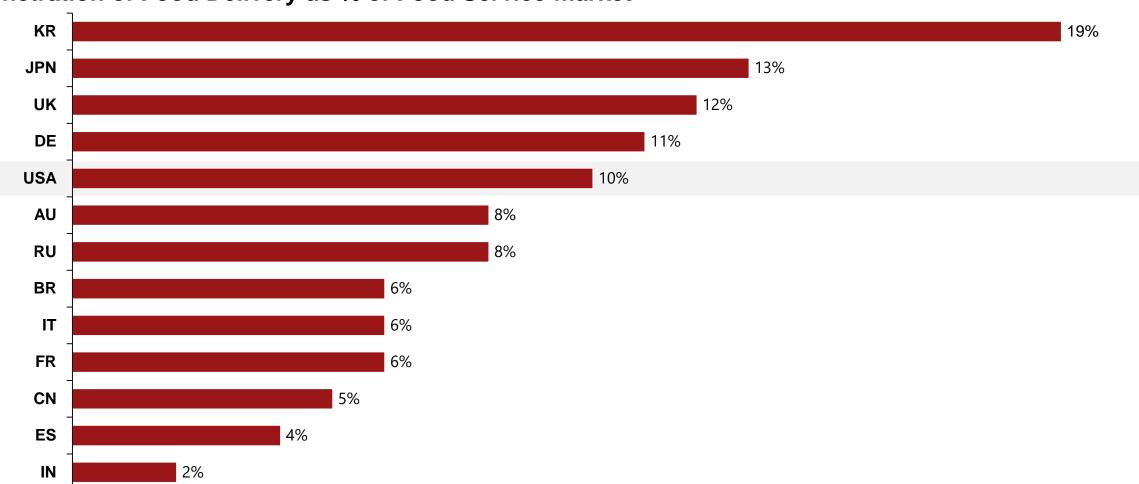
# We are witnessing a boom in Food Delivery Apps



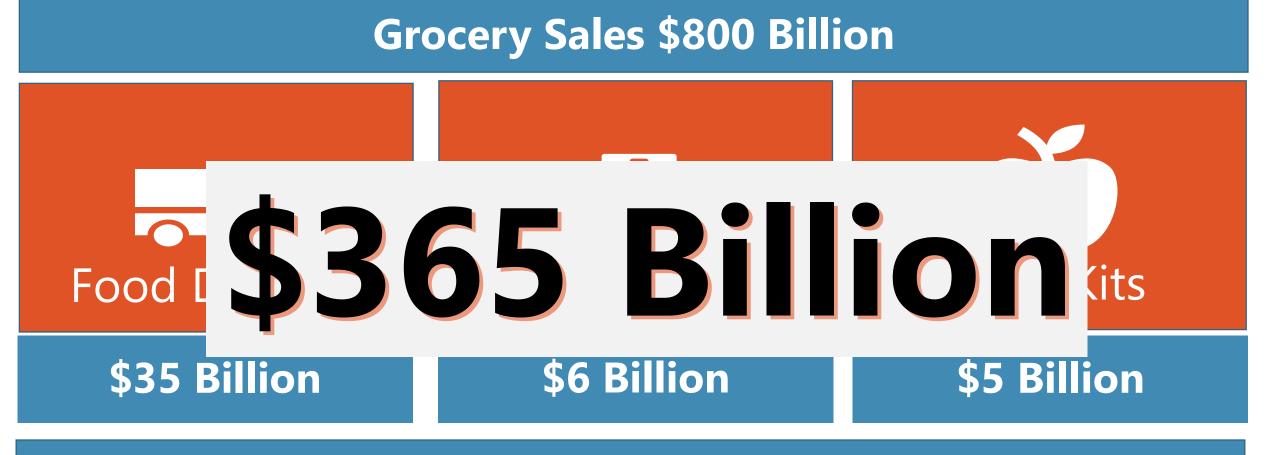
\$15bn of start-up capital has been raised in the past three years

# ... And this is only the beginning

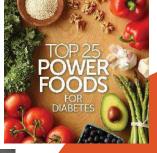
### Penetration of Food Delivery as % of Food Service market



Online ordering is increase by ~10X by 2030



Restaurant Sales \$800 Billion





**Custom Meals** 

Meal Kits



Blue



Ready Meals JIT Delivery

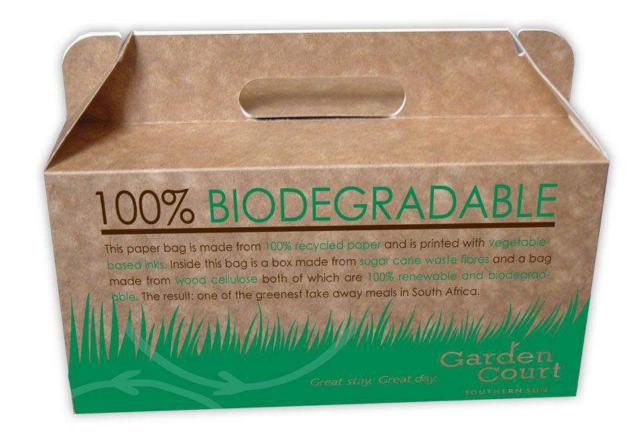


**GRUBHUB** 

# The boom in online ordering requires the management of 6 key factors

1 Product Development	Standardize recipe development, including preparation procedures Focus on procuring ingredients efficiently and prepare products in a cost effective manner Packaging sustainability suitable for e-commerce
2 Production	<ul> <li>Select production model (e.g. central kitchen, in-restaurant) based on business drivers</li> <li>Build capability to produce wide range of offerings</li> </ul>
3 Supply Chain	Network and route optimization updated once to twice a year Evaluate forming transportation consortiums
Digital / Al tools	Adopt digital tools to <b>provide supply chain visibility</b> including inventory, food costs, and labor productivity  Leverage <b>machine learning</b> to drive forecasting and allocations
Ouality Assurance and Food Safety	Integrate <b>quality and food safety governance</b> into production process Strong management of food safety (e.g. Safe Serve)
Governance	Ensure the right KPIs used to measure performance and success Establish proper governance to outline ownerships (e.g. deli manager's role) and capture synergies between foodservice and retail

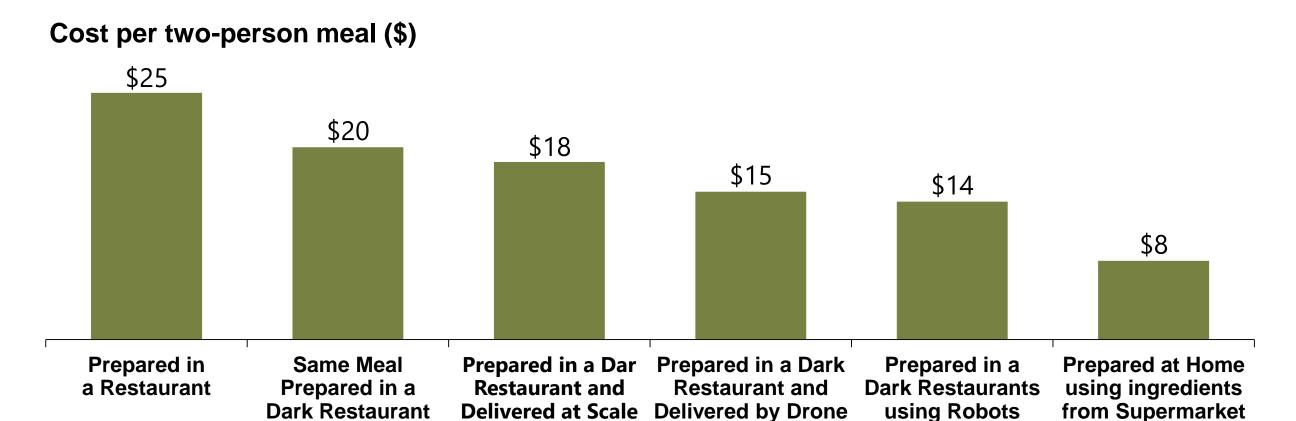
With the race for delivery... packaging will become even more critical



The latest start up ... Cloud Kitchen deemed the "Uber of Kitchens"



### The operating model of your delivery will drive cost



### Partnership opportunities can allow for more differentiated operations

#### **Local Differentiation**



### BUY LOCAL

Partner with **local communities** to bring unique offerings

- Local Restaurants
- Establish in-store locations
- Feature offerings in deli section
- Local Food Trucks
- Offer on-site permanent location
- Establish rotating food truck programs
- Farmers Markets
- Host periodic farmers markets

### **Scalable Supply Chain**





Partner with a national player commissary or fresh foods provider -- infrastructure

- National **distributors** with foodservice experience
- Leverage menu and kitchen execution support
- Drive continuous menu innovation

#### **Innovation**



**Externalize innovation** to ensure customers, suppliers and driving need based products

- Partnership with online Meal kits providers:
- Support with infrastructure (directed buys, supply chain, access to stores)
- Drive more Household loyalty and solve an unmet need
- Partner with **Health providers** / **local doctors**
- Become a destination for healthy food

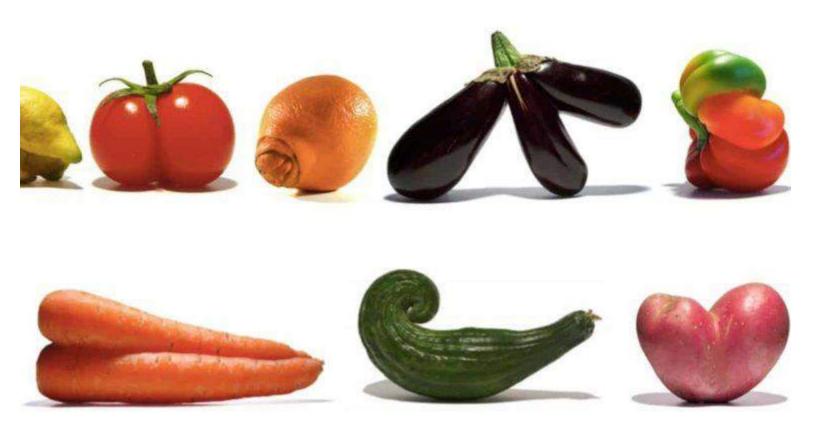
#### **Best Value Product**



### Partner with food-service centric supply chain organizations

- Form consortium / partnerships (e.g., GPO) to establish scale
- Unlock synergies in supply chain and procurement of raw materials
- Establish joint shipments / joint procurement
- Candidates include non competing retailers with similar product needs

# Local partnerships – Imperfect Foods Online Platform





- Mission: Buying ugly and surplus produce helps support farmers (work with 200 growers)
- Food Comes from:
- Off Spec
- Surplus
- Undervalued
- Packaging Change
- Short Coded

### All empowered tools are everywhere and expected to shape the future

### Al Case Examples in Retail Planning and Execution

Illustrative

# Better Demand Management at a Home Improvement Retailer

Home Depot partnered with AI and advanced analytics firm Predictix (acquired by Infor in 2016) to implement a demand management tool to increase assortment localization

Double Digit Comparable Sales Growth in Pilot Category

# Forecasting Improvement at an European eCommerce Retailer

**Otto** implemented a machine learning solution, trained with historical data, that continuously evaluates the forecasting quality and learns from past events.

40% improvement in forecast quality and 20% reduce remaining stock at end of season

# Better Store Planning at a British Grocery Retailer

Morrisons invested in a Replenishment Optimization Solution, which uses AI to improve demand planning at a item/ SKU/ day level and brings in fully automated daily store ordering

30% reduction in shelf OOS, 2-3 days reduction in days of supply, lower shrink and higher team productivity

# Replenishment Optimization at a German Retailer

Kaufland, using Machine Learning technology, automated central planning for store orders. In the process, both internal and external data (holidays, weather) were accounted for in the decisions.

Improved Product Availability reduced store labor, and increased product freshness in store

### Al is leveraged to understand to optimize planning

### **Use Case 1:** Predictive Planning



- Otto, Germany's largest multi-channel retailer implemented a machine learning solution, trained with historical data, that continuously evaluates the forecasting quality and learns from past events. Otto was able to achieve:
  - **40%** improvement in forecast quality
  - 20% reduce remaining stock at end of season



- Wayfair an internet retailer for furniture's with more than 7m items and 1bn\$ of revenue uses ToolsGroup predictive commerce, a machine learning solution that identifies most reliable demand indicators for new products while updating its model over time as consumer behavior changes
  - **50%** reduction in forecasting errors
  - **25%** increase in inventory turns

### Al is leveraged in product sourcing

### **Use Case 2:** Digital Procurement

### Robotic Process Automation at a large Electronics Player

Siemens leveraged Al based advanced sourcing tool Keelvar to execute a transformation of their sourcing capabilities.

The Keelvar platform enables automation of the sourcing process, building Machine Learning capabilities to identify allocation strategies that deliver sustainable cost take-out.

These solutions are effective for tail spend in strategic categories, enabling Sourcing teams to automate the RFP process and generate insights based on scripts developed in previous sourcing events.

Large increase in spend penetration and double-digit savings opportunities on un-touched categories

### Advanced Category Management Platform at a Pittsburgh based Metals Giant

Client desired industry-leading capabilities in bulk ocean freight category management, a category still managed exclusively through Excel and phone calls with Brokers.

Jointly developed an automated bid platform with A.T. Kearney replicating existing templates which enabled team to execute multi-round tender in substantially less time than current process.

Employed Llamasoft Supply Chain Guru to model fleet deployments and cargo allocations based on shifting schedule and variable market rates.

Developed Monte Carlo simulation tool to evaluate likely ranges of market behavior in freight, oil and metals markets

Reduction in freight rates of >10% with reduced workload and increased fleet efficiency by 3%

### Al is leveraged to optimize transportation

### **Use Case 3**: Optimized Transportation



- Rage Frameworks and A.T. Kearney supported a \$100B food retailer leveraging a machine learning solution that analyzed integrated real-time carrier data (structured and unstructured) to identify cost vs. invoice discrepancies
  - Proof of concept showed sources of carrier overbillings and cost recovery opportunities
  - \$30M+ cost savings and cost avoidance identified



- Otto, the subsidiary of Uber, delivered a truckload of Budweiser traveling 120 highway miles in a self-driving truck. Al technology that enables autonomous driving is well suited to relatively predictable long hauls on highways leading to significant opportunities for truck fleet owners and managers.
- -120 highway miles in first self-driving truck at an average speed of 55mph

