Digital Malls:

The Next Generation of Self-Service Shopping

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Executive Summary

- Retail ecosystem faces challenges: grow returns, enhance customer experiences, optimize urban formats, and differentiate brands
- Three emerging, technology-enabled trends—**innovative vending machines, micro-markets, and virtual stores**—show promise, but pursued alone, are not enough to combat retail challenges
- Combined, these three components could create Digital Malls: engaging, self-service shopping destinations in densely populated venues, with lower labor, real estate, and construction costs
- Digital Malls will offer a broad range of venue-appropriate merchandise, services, and entertainment, and could be stationary or mobile installations
- Cisco forecast: $7 billion U.S. opportunity with quick payout periods
- A single technology infrastructure for Digital Malls will provide a holistic consumer experience and cost sharing

Source: Cisco IBSG, 2012

Background and Challenges

Retail Challenges: Urbanization, Growth, Customer Experience

Changing Demographics, Economics, and Technology

- Continuing urbanization
- Unemployment, economic uncertainty
- Growth of e-commerce and mobile showrooming
- Millennials’ digital shopping expectations

Challenges for Developers, Retailers, Vending Operators, and CPG Manufacturers

- Reverse slowing returns from U.S. mall, store, and vending assets
- Create enhanced customer experiences
- Reduce labor and construction costs
- Deepen brand differentiation
- Optimize small urban formats
- Justify investment in equipment innovation

Sources: U.S. Census Bureau; Reuters, 2012; comScore, 2012; Vending Times Census of the Industry, 2011

Beginning of an Opportunity: Three Trends in Self-Service Retailing

Three trends are reinvigorating unattended retailing, creating a new retail opportunity:

1. **Innovative Vending**
   a. Technology enabling a more convenient, engaging vending experience
   b. Consumers willing to buy higher-priced goods and services from machines and remote experts
   c. Vending becoming a point-of-purchase marketing opportunity as well as a sales channel
2. **Micro-markets** expanding sales in the workplace
3. Retailers piloting **virtual stores** without any inventory

Sources: Vending Times Census of the Industry, 2011; Automatic Merchandiser, 2011; Cisco IBSG interviews, 2012

First, a Few Definitions of Terms

- **Innovative vending:** networked vending machines offering an array of consumer experiences and/or back-end efficiencies
- **Micro-markets:** unattended small stores with open shelves of products, plus vending machines, coolers, and freezers. Today, offer food and beverages in workplaces
- **Virtual stores:** today, glass walls or e-paper containing pictures of products plus QR codes so that consumers can order via mobile for delivery

Digital Malls: vision of a new shopping mall combining innovative vending, next-generation micro-markets, and/or next-generation virtual stores for a highly engaging, lower-cost shopping experience

Source: Cisco IBSG, 2012

Trend #1: Innovative Vending Creating More Engaging Consumer Experiences

Innovation	Improved User Experience
Cashless	Enables 33% of population without exact change
Touchscreen interactivity / video / gesture	Provides product information, entertainment, marketing
Networked location data	Creates site-specific assortment, preloaded trucks, and dynamic routing
Mobile and social	Connects people and machines for promotions, loyalty programs, advance / multiple purchases
Facial recognition	Recognizes consumer segments for insight, offering, and marketing customization
Remote expert	Supports high-information, high-touch goods and services categories

Moving beyond "dumb" analog devices, the $40B–$50B vending industry is now at technology and sales tipping point

Source: Cisco IBSG, 2012

Consumers Buying Higher-Priced Goods from Machines, Remote Experts

Wider Range

- Consumers willing to buy a wider range of goods and services from machines or remote experts, including
  - Electronics
  - Apparel & Beauty
  - Dry Cleaning
  - Pharmaceuticals
  - Banking

Higher Price Point

- Higher price points allow higher ROI on more expensive, innovative machines
- Should be located in high-traffic, demographically appropriate locations

Better Experience

- Machines selling luxury or information-intensive goods require more sophisticated shopper experience
  - Cashless payments
  - Video and interactive media
  - Remote experts

Sources: NAMA study, 2011; Cisco IBSG, 2012

Unattended or Remote Retail Spans Many Product and Service Categories

Best Buy Express
Electronics

Kroger
Grocery, GM

24-Hour Flowers
Fresh Flowers

U*tique
Fashion

Art-o-Mat
Small Artworks

Gold-to-Go
Gold Bars

PharmaTrust
Pharmaceuticals

Chase
Banking

Source: Cisco IBSG, 2012

Vending Becoming Point-of-Purchase Marketing Opportunity

- Technology-enabled vending machines provide opportunities for CPG and retail marketers
  - —Create **targeted advertising impressions**
  - —Introduce consumers to **other brands,** conduct **trials of new products**
  - —Control **brand messaging** at the point of purchase
  - —Integrate **digital marketing campaigns** across web, social, mobile, vending
  - —Enable **variable pricing** based on sales, promotions, even weather
  - —Gather **consumer insight** into purchasers, purchase journey
- Marketing-oriented machines have special requirements due to their high cost and often lower revenues
  - —Target **high-traffic, prestige locations**
  - —Require marketing / innovation funding plus **marketing and sales ROI metrics**

Source: Cisco IBSG, 2012

CPG Marketing-Oriented Vending Examples: Sodas, Snacks, Beauty

Pepsi Be Social
- Beverage gifting
- Social, mobile, video

Coca-Cola Hug Machine
- Open happiness campaign
- Gesture technology

Kraft Temptations
- New product sampling
- Interactive, mobile, facial recognition

P&G Beauty Bar
- Cross-brand trial, mall distribution
- Video, remote experts

Marketing-oriented machines incorporate interactive video, games, mobile, social media, remote experts, and gesture technology

Source: Cisco IBSG interviews, 2012

Benefits Include Sales, Productivity, and Branding

Innovative Vending Benefits

- Increased market penetration
- Low labor sales
- Higher price points
- Bigger basket size
- Improved assortment
- Supply chain efficiency
- Consumer insight
- Point of purchase, controlled messaging
- Integrated digital campaigns
- Advertising effectiveness
- Variable pricing

Source: Cisco IBSG, 2012

Innovative Vending Is Expanding with More Affordable Pricing

- Prices declining with participation of traditional manufacturers and industry innovators
- Prices for cashless, networking, and video capabilities in traditional food / beverage range from $300 legacy retrofit to $5,000 new, plus connectivity, payment, and analytical services

Examples:

Crane New Snack Machine

- Graphic display with touchscreen
- Credit card, connected
- Analytic software
- ~$4,400 with shipping

VendScreen Machine Upgrade

- Small screen for legacy machines
- Video, mobile coupons, problem reports
- Camera tracking
- $300, plus 2.75% of sales

Source: Cisco IBSG interviews, 2012

Trend #2: Unattended Micro-Markets Driving Growth in Workplaces

- Micro-markets are **unattended, small convenience stores** in workplace locations
  - —Open shelves of snacks plus coolers and freezers for cold drinks, fresh food, and frozen treats
  - —Self-service kiosks enabled by cashless, product scanning, video technology, and camera security
  - —Networked for logistics efficiency and consumer data analysis
- 1,000-1,500 installed today by vending operators, typically in workplaces with 250+ employees
- Cisco forecasts possible 70K workplace locations, 9.3% 5-year CAGR (vs. 3.2% for traditional vending)

Source: Cisco IBSG, 2012

Micro-Markets Provide Significant Consumer, Retailer, Operator Benefits

Micro-Market Benefits

Employees & Company	More choice, no labor	• Wider, potentially healthier variety of products than vending, without cafeteria labor • No need for exact change • Nutritional information via video meets FDA requirements, HR preferences
Operators, CPG, Retail	Higher sales & profit	• Increased consumer penetration: from ~10% to 20-30% • More SKUs: from ~45 to 272 average • Higher prices, ability to collect sales tax • Reduced commissions • Ability to collect data for consumer insight and marketing

Source: Cisco IBSG interviews, 2012; Canteen Vending Services

Trend #3: Completely Virtual Stores With No Inventory

- Pilots of virtual stores without inventory enabled by confluence of e-commerce operations, high-resolution and interactive screens or e-paper, mobile QR codes, and gesture technology
- Consumers click and purchase goods for later delivery
- Virtual stores can be stationary or mobile, permanent or pop-up

Tesco
Gatwick Airport

@PG Mobile with Walmart.com
New York, Chicago

Pão de Açúcar
São Paulo, Brazil

Source: Cisco IBSG, 2012

Pilots Meet Needs for Convenience, Endless Aisle, and Impulse Purchases

- Virtual store benefits: **convenience** (shopping while waiting), **endless aisle** (access to items not in stock), and **impulse delights** with no or minimal labor
- Typically seen in high-traffic areas, ideally where shoppers have time to browse, such as airports/transit, stadiums, amusement parks, and malls

Sears/Kmart Toys
Airports

Glamour Apothecary
NYC Street

Adidas Virtual Footwear
Retail Flagship

Source: Cisco IBSG, 2012

However, These Trends Alone Are Not Enough To Combat Retail Challenges

- Innovative vending, micro-markets, and virtual stores standing alone are insufficient to tackle challenges facing retail ecosystem

Challenges	Why Trends Insufficient Alone
Slowing Returns, Urbanization	▪ Individual innovative vending machines, virtual stores, and micro-markets fragment retail ▪ Customers still need retail destinations in order for digital innovations to create return traffic, sustainable excitement
Costs: SGA, Real Estate, Vending Innovation	▪ Stand-alone components do not build the manufacturing, technology, maintenance, or service fee scale necessary to lower costs
Enhanced Experiences, Branding Differentiation	▪ None of three trends provides both immediate purchase gratification *and* the assortment/convenience of endless aisle ▪ Today, none provides leading-edge technologies like augmented reality, remote expert, or 3D becoming more prevalent in retail ▪ Micro-markets today are unknown brands or workplace white-labeled

Source: Cisco IBSG, 2012

Cisco Vision: Digital Malls

Cisco Vision: Combine Trends into Sophisticated Self-Service Digital Malls

- **Digital Malls:** Highly interactive, graphically exciting, self-service shopping environments. Combine innovative vending, next-generation virtual stores, and/or next-generation micro-markets to create **digital retail destinations**, with dramatic improvements in labor, real estate, construction, and technology costs
- **Where:** High-traffic venues—both secure and public, indoor and outdoor—such as large workplaces, residences, hotels/resorts, stadiums, amusement parks, shopping malls, airports, transit, frequent-flyer clubs, festivals, and events
- **What:** Broad range of venue-appropriate retailers, consumer goods, remote-expert services, and entertainment; stationary or temporary installations
- **Retail Ecosystem:** Mall developers, vending operators, retailers, consumer manufacturers, consumer services, entertainment companies, technology partners

Source: Cisco IBSG, 2012

Resort Hotel Digital Mall with Virtual Stores, Innovative Vending, Micro-Market

Source: Cisco IBSG, 2012

Public Transit Digital Mall with Innovative Vending, Virtual Stores

Source: Cisco IBSG, 2012

Digital Malls Introduce Next-Gen Micro-Markets: Beyond Workplace Lunch

Expanding the Micro-Market Concept

- **New locations:** Large apartment/condo buildings, small hotels
- **Products & services beyond food and beverage:** General merchandise, travel necessities, consumer electronics plus services such as remote banking, dry cleaning, pharmacy, e-commerce lockers
- **Branding:** Small-format or licensing opportunity for major retailers or vend operators, depending on location demographics
- **Additional consumer technology:** For higher-traffic and secure locations, could include:
  - —Additional video screens or video walls displaying advertising and lifestyle images, enhanced by augmented reality
  - —Screen/kiosk connections to e-commerce
  - —Remote experts or avatars for banking, health, concierge, travel, beauty
  - —Personalized offerings based on consumer identification

Source: Cisco IBSG interviews, 2012

Next-Gen Virtual Stores: Multiple Retailers, Latest Consumer Technology

Virtual Store to Digital Destination

- **Today's virtual stores:**
  — Primarily single retail or CPG brand stores
  — Simply enabled with high-definition, interactive touchscreens and QR codes
- **Tomorrow's next-generation virtual stores:**
  — Multiple retailers
  — Marketing or entertainment video
  — Mobile / social promotions
  — Interactive information, games, or entertainment
  — 3D, gesture technology or augmented reality for immersive experiences
  — Remote experts to handle questions, services

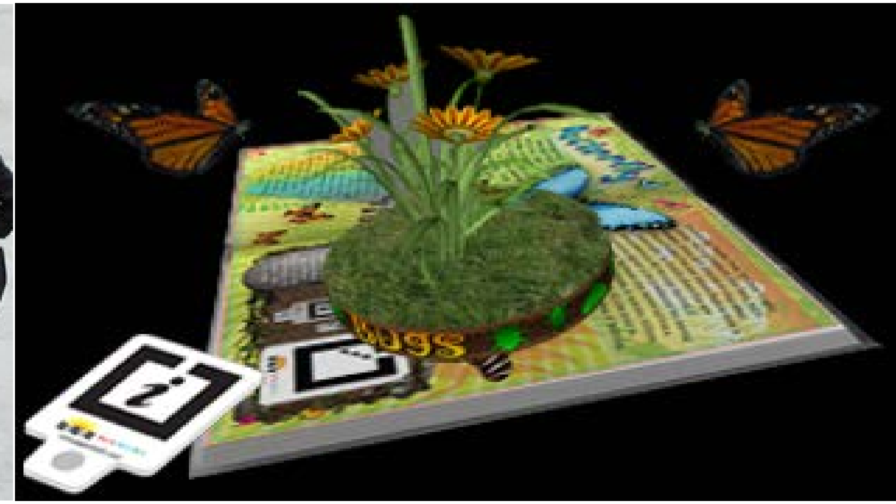
Source: Cisco IBSG, 2012

Examples: Apparel and Accessories Shopping in Next-Gen Virtual Stores

- Augmented-reality and gesture-recognition technology enable customer to try on clothes, sunglasses, jewelry, and other accessories—virtually

Source: Facecake.com; RayBan; Cisco IBSG, 2012

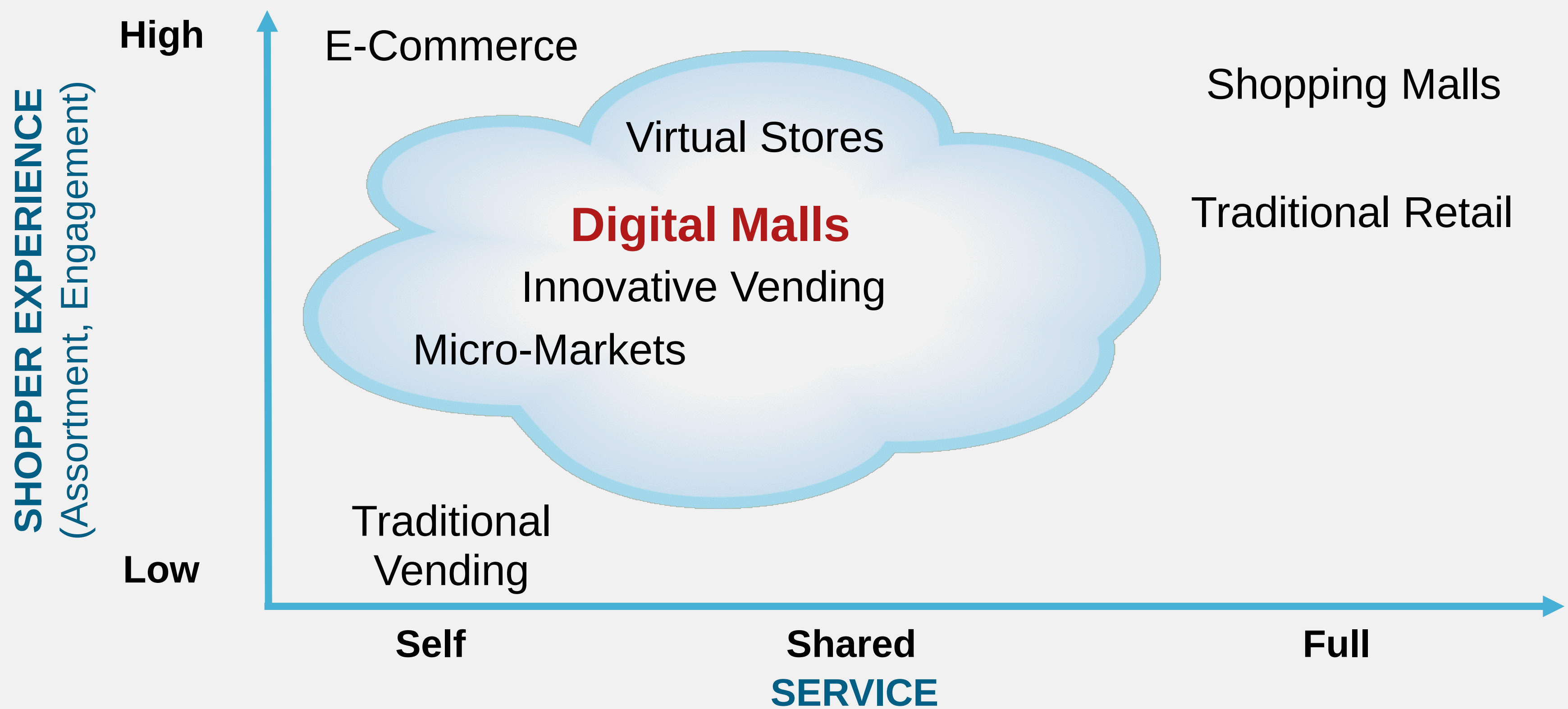
Examples: Immersive Entertainment in Next-Gen Virtual Stores



- Augmented-reality and 3D technology can create interactive images for immersive entertainment experiences or special promotions

Source: designcognition.com; National Geographic YouTube; poparbooks.com; Cisco IBSG, 2012

Digital Malls: Sophisticated Shopping Experience with As-Needed Labor



Digital Malls combine high consumer experience, including assortment and engagement, with the no- or low-labor models of automated retailing

Source: Cisco IBSG, 2012

Digital Malls Have Many Consumer, Marketing, and Operational Benefits

Digital Mall Benefits

Consumer	• Convenience, self-discovery of vending and e-commerce in physical space • Larger product and service assortment than vending • Fun and entertainment, expanded access to experts
Retailer & Manufacturer Marketing	• Controlled, personalized brand messaging • Outlet for sampling and trial of new products or brands • Expanded channel distribution, opportunity to capture new consumers • Sales and consumer data for business analytics • Enhanced financial justification for equipment innovation
Mall, Retail & Vending Operations	• Expanded footprint into urban / densely populated areas at lower cost • Increased sales from additional locations, better assortment, higher price points, traffic to physical malls • Modified assortment at lower cost, including “temporary tenants” • Improved margins from higher price points, lower costs

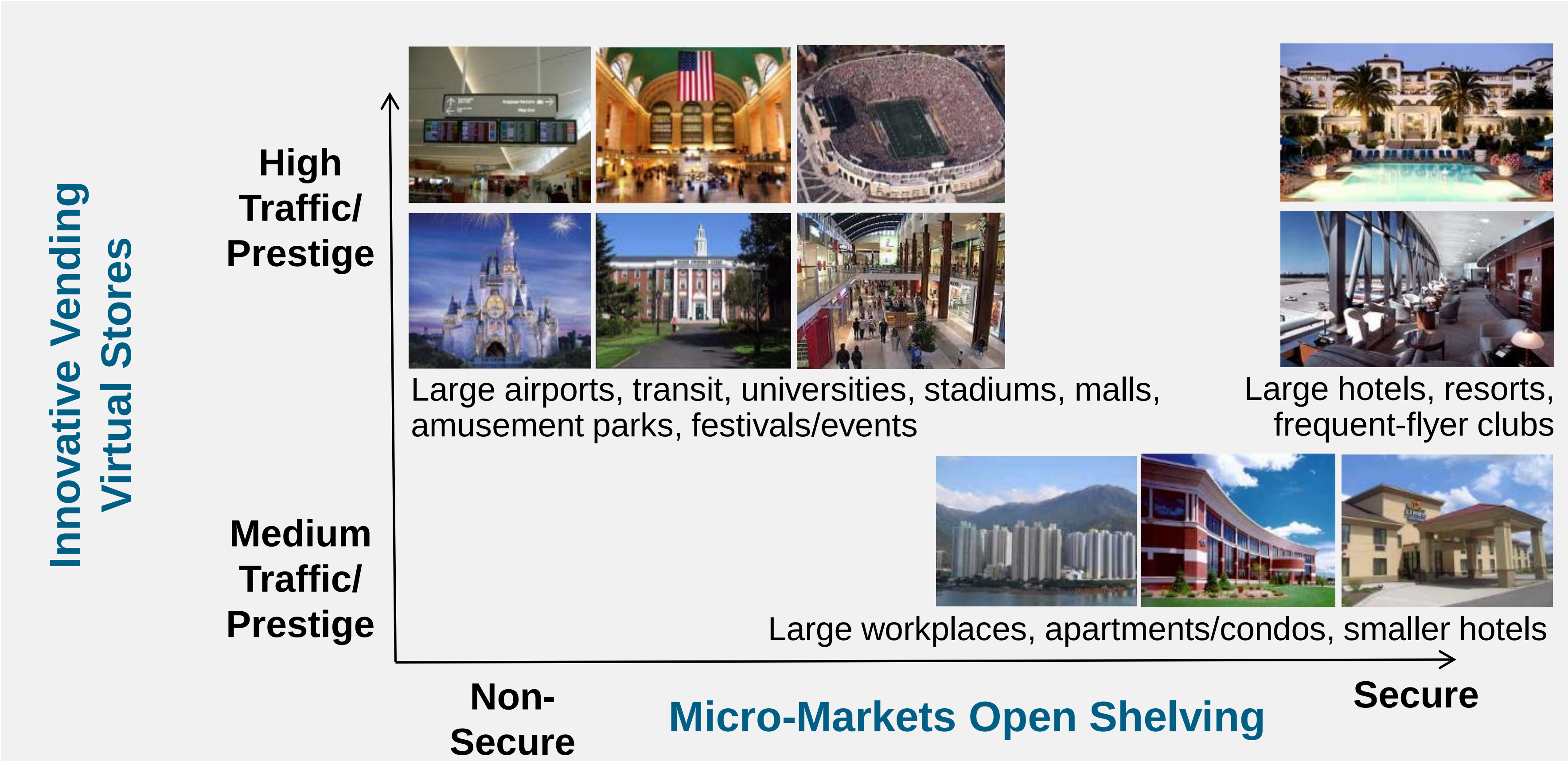
Source: Cisco IBSG, 2012

Combining Three Retail Trends Helps Solve Retail Ecosystem Challenges

Challenges	Why Digital Malls Can Help
Slowing Returns, Urbanization	▪ Creates retail destination to drive sales, return trips, and excitement
Costs: SGA, Real Estate, Vending Innovation	▪ Lowers labor through self-service or shared-service remote experts ▪ Substitutes screen and kiosk costs for real estate/construction ▪ Combines similar networked technology, security, maintenance, checkout, connectivity/payment fees to lower cost base of each component ▪ Scale encourages participation of traditional operators and vending manufacturers, lowering costs vs. specialty providers
Enhanced Experiences, Branding Differentiation	▪ Provides leading-edge technologies like augmented reality, remote expert, or 3D for immersive, differentiated experiences ▪ Presents venue branding opportunities for mall developers, retailers, CPG, large vending operators, site owners

Source: Cisco IBSG, 2012

Digital Malls: Many Solution Combinations Depending on Location



Innovative vending, next-gen micro-markets, and next-gen virtual stores could be combined in many creative ways, depending on location, traffic, prestige marketing opportunities, demographics, and security

Source: Cisco IBSG, 2012

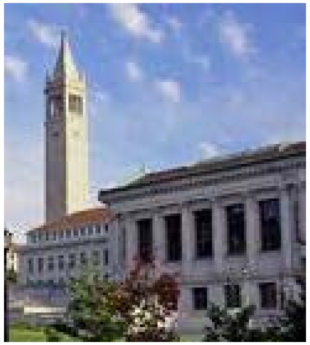
For Simplicity, We Have Grouped Digital Mall Combinations into Three Scenarios

Secure: secure, non-prestige locations

—Large workplaces, residential complexes, smaller hotels

—Need for immediate consumption, basic shopping plus services

—Opportunity for expanded, next-gen micro-markets



Prestige: high-traffic, high-profile, non-secure locations

—Large transit/airports, shopping malls, universities, stadiums, amusement parks, festivals/events

—Need for immediate consumption, but also impulse shopping, entertainment, and services

—Opportunity for innovative vending and virtual stores

Luxury: secure and prestige locations

—Large luxury hotels and resorts, frequent-flyer clubs

—Needs for immediate consumption, shopping, and entertainment

—Opportunity for expanded micro-markets, innovative vending, and virtual stores

Source: Cisco IBSG, 2012

Secure: Large Workplaces, Large Residences, or Small Hotels

- **Scenario:** Secure, non-prestige locations
- **Where:** Large workplaces or apartments/condos, smaller hotels
- **Who:** Employees, residents, and guests who don’t want to leave premises for meals, errands, and service needs
- **Solution:** Next-gen micro-markets with expanded convenience items and services to replace current vending machines, sundry shop, or honor bar
- **Possible leaders/partners:** Vending operators, retailers

Source: Cisco IBSG, 2012

Secure: Branded Workplace Example

Walmart Workplace

PRODUCTS

- Fresh-food court
- Drug store and travel necessities
- Electronic accessories, magazines, and media

SERVICES

- General merchandise vending
- Tide Dry Cleaning
- Shared e-commerce lockers
- Remote banking
- Prescription vending
- Tickets

COMPONENTS

- Next-generation micro-market
- Branded skin design

Source: Cisco IBSG, 2012

Prestige: Large Transit, Universities, Malls, Stadiums, Amusement Parks

- **Scenario:** High-traffic, prestige, non-secure locations
- **Where:** Large airports, transit, universities, stadiums, shopping malls, amusement parks, festivals/events
- **Who:** Passengers, students and guests with time and desire for impulse/extended aisle shopping and entertainment plus immediate convenience items
- **Solution:** Innovative vending banks and next-gen virtual stores offering appropriate selection of food, apparel, local goods, entertainment, tickets. Mobile digital malls for festivals and events
- **Possible leaders/partners:** Vending operators, park and mall developers




Source: Cisco IBSG, 2012

Prestige: Branded University Example

Pepsi Place

PRODUCTS

- Food & beverage
- Drugstore, grocery, beauty, and dorm necessities
- Electronic accessories, games
- Apparel

SERVICES

- Virtual shopping wall with delivery
- Interactive entertainment, ticket ordering
- Video connections to other schools

COMPONENTS

- Innovative vending
- Next-gen virtual stores
- Branded skin design

Source: Cisco IBSG, 2012

Luxury: Large Hotels, Resorts, and Frequent-Flyer Clubs

- **Scenario:** Secure, prestige locations
- **Where:** Large hotels and resorts, frequent-flyer clubs in top markets
- **Who:** Frequent travelers and families seeking upscale vacations
- **Solution:** Next-gen micro-markets, innovative vending, and next-gen virtual stores offering sundries, higher-end vacation necessities, gifts, and souvenirs to be shipped home
- **Possible leaders/partners:** Major hotel chains with integrated resort and convention experience, major airlines



Source: Cisco IBSG, 2012

Luxury: Branded Resort Example

Hilton Digital Destination

PRODUCTS

- Fresh-food court
- Immediate vacation necessities
- Kid toys, treats
- Additional souvenirs and luxury goods to be shipped home

SERVICES

- Remote concierge
- Interactive entertainment

COMPONENTS

- Next-gen micro market
- Innovative vending
- Next-generation virtual stores
- Branded skin design

Source: Cisco IBSG, 2012

The Road Forward

U.S. Market Could Total $7 Billion in Annual Revenue

- Thousands of possible locations across three scenarios
- Market size estimated at $7 billion: 17% of vending, 0.2% of retail
- Reasonable payout periods from 12-34 months, most <2 years

Secure

- Large workplaces and residential complexes, smaller hotels
- 94K locations, $5B annually
- $54K per location
- Payout only 12-15 months

Prestige

- Large airports, transit, shopping malls, universities, stadiums, amusement parks, festivals/events
- 3K locations, $1.9B
- $602K per location
- Payout 16-34 months

Luxury

- Large luxury hotels and resorts, top frequent-flyer clubs
- 260 locations, $130M
- $504K per location
- Payout 15-28 months

Source: Cisco IBSG, 2012

Vision Could Be Enabled by a "Digital Mall in a Box" Solution

High-Level Technology Required To Support Digital Mall

Immersive Experiences

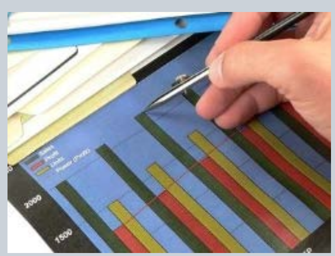
- Interactive surfaces, engaging content, capabilities
- CRM, personalization
- Video conferencing
- Mobile, PC apps

Secure Connectivity & Payments

- Indoor and outdoor Internet, WAN, Wi-Fi
- Advanced POS
- Physical and online security

Business Intelligence

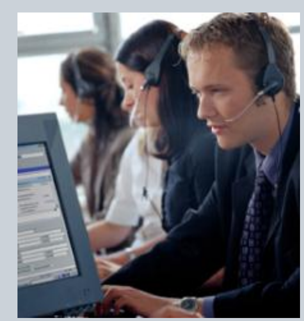
- People counting, shrinkage, campaign effectiveness, shopper insights
- Vending, virtual stores, micro-markets



Source: Cisco IBSG, 2012

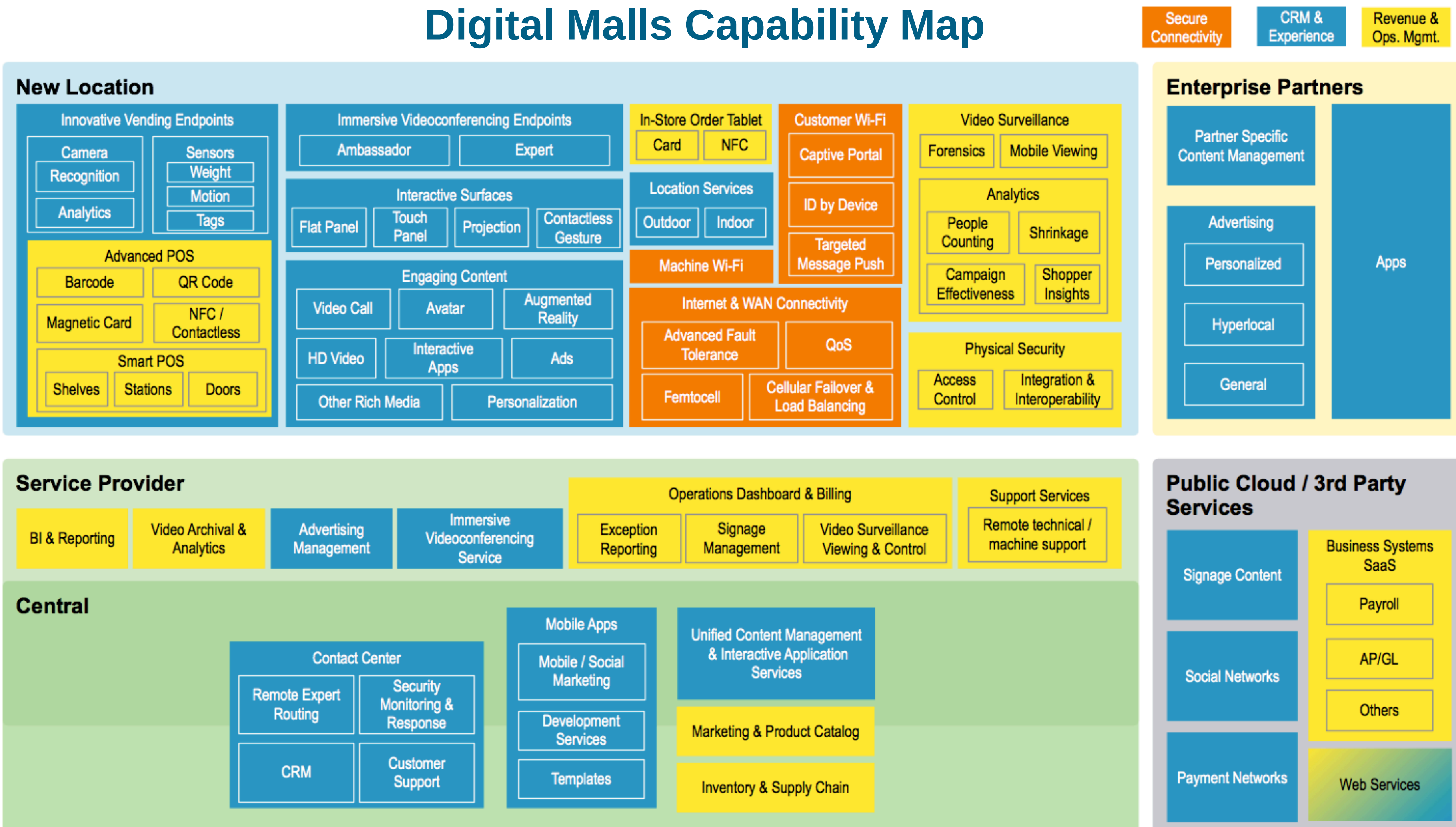
Back-End Systems & Support

- Business systems and catalog integration
- Dashboards
- Remote technical and call center support
- Content and advertising management



Digital Mall Effectiveness and Cost Savings Require Technology Architecture

Digital Malls Capability Map



Source: Cisco IBSG, 2012

What It Will Take To Succeed: Visionary Orchestrator and Successful Pilots

- **Consolidator/orchestrator** who will:
  - —Paint a vision of what is possible
  - —Build business model and plan per venue
  - —Sell the concept to prospective venues
  - —Bring relevant brands and design/technology partners to each venue
  - —Overcome technology, culture hurdles
- **Viable pilots** to prove the business model and business case
- **Scalable business model and solution** for one or more venues
  - —Business plan and replicable technology
  - —ROIs appropriate for retailers, vending operators, and marketing-oriented CPG

Source: Cisco IBSG, 2012

How Cisco Can Help

Source: Cisco IBSG, 2012

Business Strategy and Co-Innovation

- Develop Digital Mall vision and strategy
- Conduct “big idea” brainstorming
- Identify Digital Mall opportunities in a particular sector or geography
- Create pilot business plan
  - —Locations
  - —Product and service assortments
  - —Consumer experience and success factors
  - —Market sizing, economic models
  - —Business architecture

Architecture and Technology

- Create technology architecture
- Identify right components and partners for pilot “Digital Mall in a Box” solution
- Lead proof-of-concept/pilots

First Steps To Take Now

- Create the vision for your industry or venues of expertise
- Test concept with a few potential business partners, retailers, or venues
- Construct a business model for a solution in each venue
  - —Target consumers, positioning, and branding
  - —Appropriate products and services
  - —Revenue models and forecasts, profit & loss
  - —Operational plans
  - —Roles and responsibilities
- Define and cost-out configurable solution

Source: Cisco IBSG, 2012

CISCO

Appendix

Digital Malls Addressable Market: $7B or 17% of Vending Industry

Scenario (location category)	Solution	# of locations	Annual revenue opportunity (US$ M)	% of vending industry	% of retail industry
Scenario 1: Secure	*Micro-Market Plus solution*	93,662	5,055	12.0%	0.132%
Scenario 2: Prestige	*Innovative Vending + Virtual Shelves*	3,128	1,882	4.5%	0.049%
Scenario 3: Luxury	*Micro-Market Plus + Innovative Vending + Virtual Shelves*	260	131	0.3%	0.003%
Total Digital Malls		**97,050**	**US$7,068M**	**16.7%**	**0.184%**

Source: IBSG, 2012

Scenario 1: Secure Locations Represent $5B, Two-Thirds Market

	Minimum threshold for eligibility	# of establish.	# of locations	Digital Mall locations per establish. (Avg.)	# of people visiting each location (Daily avg.)	Assumption: Customer adoption rate	Annual vending revenues (US$M)	Threshold level*
Workplaces	>250 employees per establish.	44,984	71,037	1.6	375	25%	3,831	256 employees per establish.
Apartments	>250 residents per apart. building	19,529	19,529	1.0	250	25%	1,022	176 residents per apart. building (68 apart. units)
Mid-sized hotels	250-999 rooms per hotel	2,968	2,968	1.0	310	25%	193	191 rooms per hotel
Condo hotels	100 condo hotels in the U.S.	100	100	1.0	344	25%	7	118 units per condo hotel
Luxury fitness centers	Area >30,000 sq ft for high-end fitness centre	27	27	1.0	315	25%	2	700 members per fitness club
Total - Micro-Market Plus solution		**67,608**	**93,662**				**US$ 5,055M $54K/venue**	

**Minimum size of location to recover costs in 24 months.*

Source: IBSG, 2012

Scenario 2: Prestige $2B, from Shopping Malls, Stadiums, Universities & Airports

	Minimum threshold for eligibility	# of establish.	# of locations	Digital Mall locations per establish. (Avg.)	# of people visiting each location (Daily avg.)	Assumption: Customer adoption rate	Annual vending revenues (US$M)	Threshold level*
Airports	>8m annual pax (top 46 U.S. airports)	46	316	6.9	10,520	4.5%	186	3.5m annual pax
Public transit	>9m annual ridership (top 5 U.S. subway systems)	41	56	1.4	34,219	1.1%	27	14.1m annual ridership
Universities	>12,000 enrollments	320	640	2.0	7,873	7.5%	323	11,300 enrollments
Shopping malls	>850,000 sq ft GLA	812	1,624	2.0	11,941	4.5%	1,084	3.5m annual visitors
Stadiums	>25,000 seating capacity	219	454	2.1	21,576	7.5%	241	29,430 seating capacity
Amusement parks	>2.5m annual visitors	19	32	1.7	10,603	4.5%	19	3.5m annual visitors
Fairs & festivals	>0.5m visitors	32	6	2**	29,827	2.3%	3	n/a
Total		**1,489**	**3,128**				**US$1,882M $602K/venue**	

**Minimum size of location to recover costs in 24 months.*

***Machines shared across fairs & events. We have assumed 2 vending locations in each fair or event.*

Source: IBSG, 2012

Scenario 3: Luxury, Fueled by Captive Customer Base, High Adoption Potential

	Minimum threshold for eligibility	# of establish.	# of locations	Digital Mall locations per establish. (Avg.)	# of people visiting each location (Daily avg.)	Assumption: Customer adoption rate	Annual vending revenues (US$M)	Threshold level*
Large hotels	>1,000 rooms per hotel	150	150	1.0	1,522	25%	89	1,240 rooms per hotel
Frequent fliers clubs	Lounges in top 30 airports by pax	110	110	1.0	990	25%	42	290 seating capacity
Total - Micro-Market Plus + Innovative Vending + Virtual Shelves		**260**	**260**				**US$131M $504K/venue**	

**Minimum size of location to recover costs in 24 months.*

Source: IBSG, 2012

Component and Assortment Assumptions by Location

	Open shelve	GM vend	Dry clean	Food	Beverage	GM vend	Cons. Electro.	Fashion	Service	Virtual shelves
Workplaces	✓	✓	✓							
Apartments	✓	✓	✓							
Mid-sized hotels	✓	✓	✓							
Condo hotels	✓	✓	✓							
Luxury fitness centers	✓	✓	✓							
Airports				✓	✓	✓	✓	✓	✓	✓
Public transit				✓	✓	✓	✓	✓	✓	✓
Universities				✓	✓	✓	✓	✓	✓	✓
Shopping malls				✓	✓	✓	✓	✓	✓	✓
Stadiums				✓	✓	✓	✓	✓	✓	✓
Amusement parks				✓	✓	✓	✓	✓	✓	✓
Fairs & festivals				✓	✓	✓	✓	✓	✓	✓
Large hotels	✓	✓					✓	✓	✓	✓
Frequent fliers clubs	✓	✓					✓	✓	✓	✓

Micro-Market Plus | **Innovative Vending** | **Virtual storefront**

Source: IBSG, 2012

Assumptions for Average Transaction Values and EBITDA

	Open shelve	GM vend	Dry clean	Food	Beverage	GM vend	Cons. Elect.	Fashion	Service	Virtual shelves
Average transaction value	$2.0	$3.5	$5.0	$1.3	$1.3	$3.5	$30.0	$30.0	$1.0	$30.0
EBITDA margin	23%	23%	23%	13%	13%	13%	13%	13%	13%	10%

Micro-Market Plus | **Innovative Vending** | **Virtual storefront**

**Present value of annual recurring costs for 5 years calculated to estimate Cisco TAM. Discount rate of 12% is assumed.*

Source: IBSG, 2012

Solution Cost Assumptions

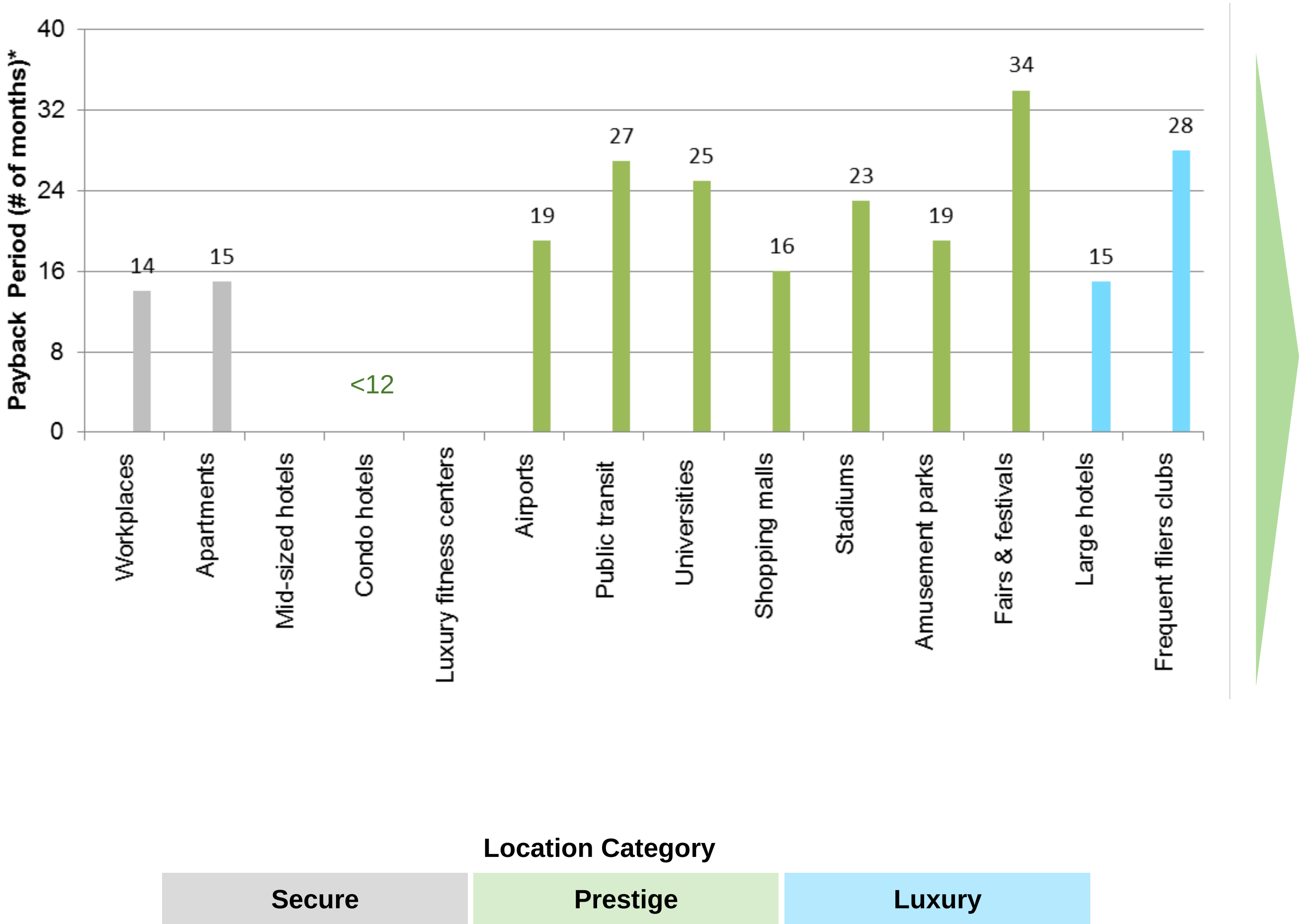
	One-time Cost		Annual Recurring Cost	
	Solution CAPEX*	**CAPEX on vending machines**	**Solution OPEX***	**Leasing costs on vending machines****
Scenario 1: Secure	US$12,490	-	US$1,718	-
Scenario 2: Prestige	US$56,220	US$17,600	US$10,583	US$13,316
Scenario 3: Luxury	US$74,921	US$4,400	US$13,295	US$13,316

**Fixed cost of deploying Digital Malls is shared between number of vending locations owned by each operator (400 and 30 locations per operator assumed for Scenario 2 and 3, respectively).*

***Consumer electronics and fashion vending machines are leased at a 12% discount rate (upfront cost of US$24,000 each)*

Source: IBSG, 2012

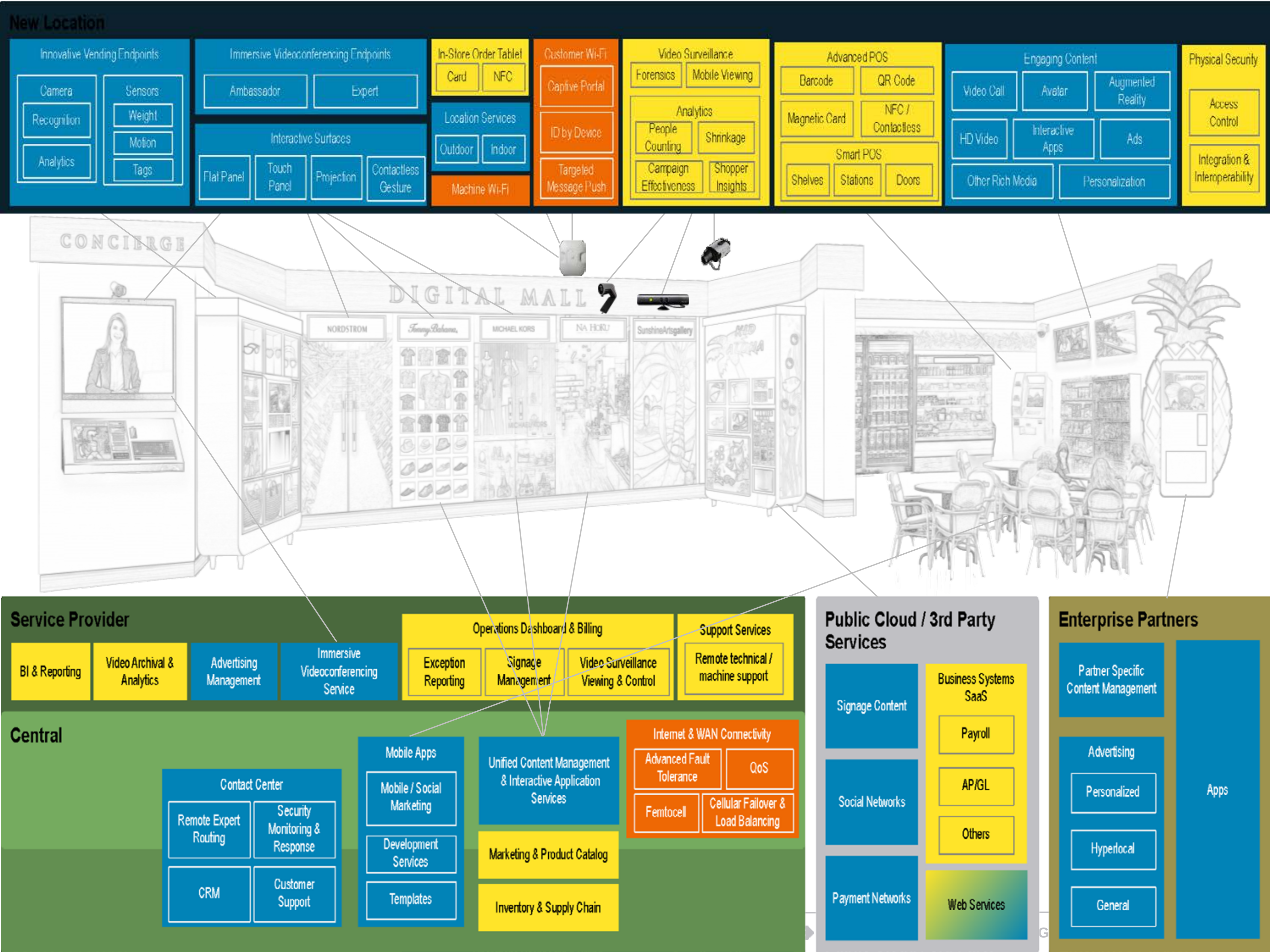
Digital Mall Investments Payout in Most Venues in Less than 2 Years



- **Secure locations** (Scenario 1) are well-suited to Digital Malls due to their captive customer base, high profitability, and relative low capex commitment. Payback within 12 months.
- **Prestige** (Scenario 2) and **Luxury** (Scenario 3) locations have payback period in the 15-28 months range due to high capex committment and need to deploy multiple vending locations in non-secure location.
- **Customer traffic potential and days of operation** holds the key for decision to deploy Digital Malls.

Source: IBSG, 2012

**Payback period is less than 12 months for location categories without a bar.*


New Location
Innovative Vending Endpoints
Camera
Recognition
Analytics
Sensors
Weight
Motion
Tags
Immersive Videoconferencing Endpoints
Ambassador
Expert
Interactive Surfaces
Flat Panel
Touch Panel
Projection
Contactless Gesture
In-Store Order Tablet
Card
NFC
Location Services
Outdoor
Indoor
Machine Wi-Fi
Customer Wi-Fi
Captive Portal
ID by Device
Targeted Message Push
Video Surveillance
Forensics
Mobile Viewing
Analytics
People Counting
Shrinkage
Campaign Effectiveness
Shopper Insights
Advanced POS
Barcode
QR Code
Magnetic Card
NFC / Contactless
Smart POS
Shelves
Stations
Doors
Engaging Content
Video Call
Avatar
Augmented Reality
HD Video
Interactive Apps
Ads
Other Rich Media
Personalization
Physical Security
Access Control
Integration & Interoperability
CONCIERGE
DIGITAL MALL
NORDSTROM
MICHAEL KORS
NA HOKU
Service Provider
BI & Reporting
Video Archival & Analytics
Advertising Management
Immersive Videoconferencing Service
Operations Dashboard & Billing
Exception Reporting
Signage Management
Video Surveillance Viewing & Control
Support Services
Remote technical / machine support
Central
Contact Center
Remote Expert Routing
Security Monitoring & Response
CRM
Customer Support
Mobile Apps
Mobile / Social Marketing
Development Services
Templates
Unified Content Management & Interactive Application Services
Marketing & Product Catalog
Inventory & Supply Chain
Internet & WAN Connectivity
Advanced Fault Tolerance
QoS
Femtocell
Cellular Failover & Load Balancing
Public Cloud / 3rd Party Services
Signage Content
Social Networks
Payment Networks
Business Systems SaaS
Payroll
AP/GL
Others
Web Services
Enterprise Partners
Partner Specific Content Management
Advertising
Personalized
Hyperlocal
General
Apps