

DYNAMIC SIGNAGE *in* FOOD SERVICES

GUIDEBOOK

by Lyle Bunn

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By Lyle Bunn (Ph.D. Hon)

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Dynamic Signage in Food Services: A Guidebook for Revenue Improvement & Cost Reduction

Food services is a high growth area of dynamic signage use in quick service, fast casual, food court, cafeteria and dining halls for digital menu boards, promotional boards and displays in waiting area, lounge, dining room, self-ordering, line-busters and play-areas.

This comprehensive “how to” guide will provide information useful to plan and source their digital signage initiative as food services providers define, future-proof and invest in their use of the medium to keep pace with competitors, industry best practices and the changing regulatory environment.

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LG Electronics, providers of display panels and other dynamic media products and services serves food services providers everywhere, having demonstrated high value in large, growing and small dynamic media projects. LG Electronics, Inc., is a \$49 billion global force and technology leader in consumer electronics, home appliances and mobile communications. LG Electronics sells a range of commercial displays and digital signage packages as well as stylish and innovative home entertainment products, home appliances, mobile phones, air conditioning systems and solar energy solutions, all under LG's "Life's Good" marketing theme. LG Electronics is a 2012 ENERGY STAR Partner of the Year. For more information see www.LG.com

Executive Summary

The food service location is ground zero - the front line - the forward operating theatre or “zero moment of truth” on the path to purchase for 47%, \$660 billion of North American annual food purchasing. 200,000 of the total 980,000 North American food services locations are directly impacted by emerging menu labeling regulations. Where other communications devices serve to generate traffic, brand awareness and loyalty, on-location signage must achieve revenue activation while motivating future visits.

Dynamic, electronic displays offer food service providers and their suppliers the opportunity to increase revenues, increase visit frequency and modernize their location, while reducing the cost of promotion and labeling compliance.

Uses of dynamic place-based media include digital menu boards, promotion boards, drive-thru, order confirmation, queue calling, pick up notification, info-tainment and virtual play. Dynamic signage adds vitality and modernizes an environment, providing improved branding, merchandising, ambiance and appeal.

The cost of dynamic display has steadily declined as the use of the medium has increased and improved, offering a transformative impact.

Dynamic Digital Signage achieves business and communications goals based on the proven, strong propositions that a) compelling images, messages and information can be electronically managed and presented related to the time of day and location, b) dynamic signage offers high return on communications objectives, and c) “digital” brand assets can be reused and adapted to create messages cost-effectively and that exploit the medium.

The use of the medium contributes to increased revenues through improved promotion of products and services. Costs are reduced in the publishing, distribution, posting and disposal of printed static signs, with 100% assurance of message posting. Compliance with the posting of caloric, nutritional and allergenic information is easily achieved, even as product promotion is improved.

Even the most simplistic use can deliver cost savings and increased revenue. When menu and promotion boards include dayparting, audience targeting and are linked with data such as weather, inventory and point of sale, or are integrated with mobile engagement, higher value is realized.

The way in which messaging “content” is presented on dynamic signage can include video, animations, text based on pre-defined content and inputs from inventory, point of sale and other systems, as well as external feeds including weather, news, sports, TV/cable and social media. Content elements such as quick response (QR) codes and website addresses can engage patrons in online media,

while the dynamic signage platform can interact with mobile devices to increase customer engagement and generate opt-in and mobile commerce.

A. DYNAMIC MEDIA IN FOOD SERVICES

Total North America restaurant industry sales are projected to be \$660 billion in 2013 in 980,000 locations, representing a 47% share of the food spending according to the National Restaurant Association (NRA).

Restaurants account for 47% of North America food spending.

Maximizing food inventories and processes, employee time and the on-location focus on profitability are of critical importance to food services operators and their suppliers.

The NRA's Restaurant Industry Operations Report (2008) notes that the median cost of food and beverage in a typical restaurant is about 32 percent of the sales dollar with salaries and wages at about 34 percent.

The median total sales per full-time-equivalent employee ranged from \$51,599 (in full service restaurants with an average check per person under \$15) to \$57,590 (average check \$15 to \$24.99) to \$60,408 (average check \$25 and over). For the limited-service restaurants surveyed, median total sales per full-time equivalent employee was \$63,365. In 2008, median income before taxes for full service restaurants was 3 percent of total sales in operations where the average check is under \$15; 3.5 percent for restaurants with an average check of \$15 to \$24.99; and 1.8 percent for full service operations with average checks of \$25 and over. For the limited-service restaurants surveyed, median income before taxes was 5.9 percent.

Digital media is proving its value in food services.

As food services providers examine the use of electronic flat panels to upgrade the static signs that have been an order counter mainstay, they are looking to maximize their possible, and in many situations, their intended investment in this new approach. "The role of digital media within the quick-service industry is evolving rapidly—and digital menu boards, in particular, are proving their value in helping restaurant owners dramatically increase the profitability of their operations," said Chris Riegel, CEO, STRATACACHE CEO.

The benefits appear immediate and obvious, and even in the simplest use of Digital Menu Boards these are well proven by current users. But this use of DS offers greater benefits in revenue activation, customer engagement and revisit frequency.

They realize that consumers are seeing these displays in many other locations including stores, transit, workplace, schools and competitor locations and are actively pursuing dynamic media as a display option.

Dynamic Digital Signage is built on the strong propositions that a) "content" can be displayed as suited to a specific demographic, location and time of day, b)

digital signage offers high return on communications objectives and c) “digital” brand assets can be adapted to create messages that exploit the medium.

A1. Dynamic Digital Signage Overview

The terms “*Digital Signage*”¹ and “*Dynamic Signage*” are often used interchangeably and are but two of the many descriptors of dynamic message display. In seeking its place in advertising plans and budgets, other descriptors have been used. “Dynamic Place-based Media” and “Dynamic Out-of-Home (DOOH)” for example, generally describe dynamic place-based media networks that carry advertising in out-of-home locations. “In-store TV” has sought a share of TV/broadcast ad spending and in being called “the Outernet,” the medium has become part of Internet advertising budgets.

According to the 2010 Arbitron Digital Video Display Study², 70% of teen and adult U.S. residents have viewed digital video displays in the past month, an estimated 181 million people.

This medium of centrally controlled video, text and animated message presentation has had a double-digit compound annual growth rate (CAGR) for over 10 years. 50% CAGR to 2005 and levels exceeding 23% CAGR since then.

“We’re riding the straight-up arrow on the growth curve,” states Chris Riegel, founder and CEO of STRATACACHE, a leader in digital signage technologies. “Consumer actions are impacted by digital signage. It’s simple: a high quality picture and motion graphic of a premium product at the point of selection showing its features and benefits entices a consumer to select it versus another product.”

Dynamic media is typically installed at points of high traffic in areas such as *Point of Purchase* (food services, retail, etc.), *Point of Transit* (walkways, elevators, bus, air, rail, train, boat stations), *Point of Waiting* (queues, medical office, lobby areas, etc.), or *Points of Gathering* (hospitality, hotels, convention centers, student unions, stadiums, offices, manufacturing, government facilities, military bases and other locations).

The networks deliver messages that inform and influence. Each of these points of display has relevance when the content message is important to a communicator *and* the viewer at the presentation time and place. Dynamic communications

*Double-digit
annual growth
for 10 years*

*“Speed to
messaging”,
Recency, message
targeting and
100% message
delivery
assurance
(compliance)*

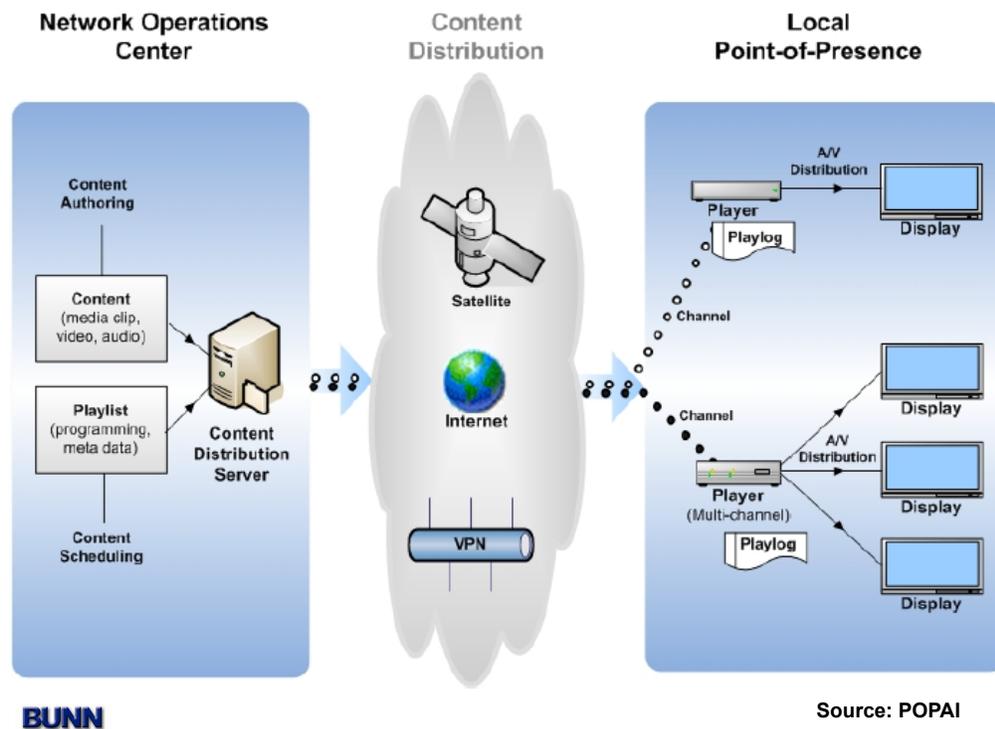
¹ Digital Signage is referred to in many ways including Campus Media, Campus TV, Digital Signage, Retail Media, Out-of-Home (OOH) Video, Digital Point-of-Purchase (POP), In-Store TV, Captive Audience TV, Narrowcasting Networks, Dynamic Display Engagement Media, Dynamic Communications Network, Place-Based Media, and Dynamic Out-of-Home, Enterprise Media, Dynamic Place-based Media, Electronic Display Systems, Video Networks and Private Media Channel.

² See http://www.arbitron.com/study/digital_video_display_study.asp

provides “*speed to messaging*”³ and *recency*⁴ while de-cluttering an environment and reducing the time and costs of processes related to printed materials and promotions.

A2. Inherent Capabilities

A typical network of dynamic media includes central control Content Management Software, connectivity between the central control point and media players that drive media presentation on devices located at decision points, high traffic or gathering areas.



The inherent characteristics of the medium are stable and unchanging, though significant incremental improvements and economies have emerged over the past five years. “Digital Signage” reflects the inherent economies of a fully digital supply chain of media creation, management, connectivity and presentation. It is a highly target-able, viewer-addressable, “audience of many”, location-based display media. Central control of message delivery to digital displays (i.e. LCD, plasma or LED) gives communications flexibility and assures 100% *compliance*⁵ of message presentation to audiences at a time of day, in out-of-home locations

Messaging relevant to time of day, location and audience.

³ “Speed to messaging” is the ability to rapidly develop and present a message, preferably with minimal efforts.

⁴ “Recency” is the term used to describe the capacity of a medium to deliver a message in close time proximity to a future action.

⁵ “Compliance” is the term used to describe the fulfillment of message delivery.

where people shop, wait, work, commute and gather. Messages have high relevance when delivering content in the context of the location, time and viewer to achieve measurable business goals. It can provide a laser focus of message delivery to time and audience, wide demographic or geographic coverage, or anything in-between.

The Dynamic Media Platform is comprised of a connectivity infrastructure, display devices and media/data management capability.

Messages on modern flat panel commercial quality displays are appealing

Flat panel digital display screens are connected by a network and controlled from a single centralized point. Displays are typically 7 to 60-inch single or tiled Liquid Crystal display (LCD), plasma or more energy efficient Light Emitting Diode (LED) boards. Both static and dynamic images can be presented. Content spots are typically integrated into a play-loop of between 2 and 20 minutes in duration, coinciding with the length of time that a person would be in the viewing proximity of the display. Play-loops and content are configured to optimally reach viewers according to traffic pace, dwell time and viewer demographic.

Dynamic signage can support mobile commerce including information download to or engagement through mobile devices such as cell phones. Using a text or SMS message, bar code or Quick Response (QR) code presented on dynamic signage a user can interact with message information. A photo of the QR Code causes the phone's browser to launch and redirect to the designated website, from which video, text, graphics or animation could be downloaded, or Mobile Commerce can be undertaken.

Better safety and notification

Monitoring and safety of patrons and property are high priorities for location managers that Dynamic Signage can serve. Permanently mounted displays offer a physical platform for mounting cameras and atmosphere monitoring devices (i.e. sound, light, smoke, hazardous material/chemical detectors, etc.). They can offer visual information, alerts and directions, and can be configured to provide audio messaging or can emit close-proximity messaging. The media platform provides an audience-of-one safety messaging, wayfinding and GPS/location detection capacity when the mobile phone is used to extend the display message.

Training and Video on Demand are increasingly delivered as part of a digital media platform. The digital display may be customer-facing most of the time, but staff-facing for training or orientation at other times of the day. A dynamic media platform can provide the ability for spokespersons to distribute video messages that inform, educate and influence.

"Visual" is our new language

"Visual is our new language" explained Paco Underhill in a keynote address to delegates of Digital Signage Expo in 2009⁶, noting "Our visual language is

⁶ Paco Underhill, founder and Managing Director of Envirosell, whose books "Why We Buy" and "Call of The Mall" are published in 27 languages. He addressed delegates of Digital Signage Expo, February 26, 2009 in Las Vegas.

evolving faster than our spoken words. We process images faster, and it is a single language”. This makes digital signage a powerful appliance to improve retailer and brand success. “And,” he added, “The value of digital signage does not decline, but increases over time when content messaging is refined”.

Dr. Hugh Philips⁷ of McGill University in Montreal, Canada has described that the human brain notices motion, in particular visual messaging. Such motion might include steam rising from food or condensation drops rolling down a cold beverage container.



He further notes that humans “ingest” sensory information (i.e. sight in particular) and rapidly, unconsciously “de-selects” items that are not related to their intended action, needs or interests. The inclusion of motion such as video or the animation of images or text causes the eye to be attracted to a message. This may be unconscious to the message viewer, who then, as unconsciously, decides if the message is relevant. If it is, the message or information is actively read or watched and “taken into” the brain.

The animations and motion inherent in Dynamic Place-based Media serves to get the “content” noticed, while its message subject or composition stimulate engagement and influence actions.

Dynamic Media is part of “transmedia” and the digital communication continuum

The power of “Owned” in the “Paid-Owned-Earned Media Model: Digital signage is part of the Communications Continuum Media Model used by brands. Communicators use multiple devices such as TV, billboards, posters Internet, etc. to maximize the economies and return on investment (ROI) of content production on this continuum has advanced significantly. This approach is typically called “transmedia.”

⁷ Dr. Hugh Philips, cognitive psychologist presented at October 13, 2006 Toronto POPAI “University on the Road” event [The Application of Shopper Psychology to Marketing at Retail](#).

based media. This increases the overall return on content production investment, while reducing the cost of message production intended for use on each medium.

Messages can be produced and presented on dynamic place-based rapidly and at low cost, providing the opportunity to test market and refine the message prior to more costly production and placement on other media, in particular TV and cable.

Dynamic signage “plays nice with others” by helping to drive traffic and engagement by viewers with other devices.

Out-of-home digital is a visually present and often captive medium and affords the chance to clearly articulate a value proposition and provide a call to action.

Content developed for mass media such as TV, print, static signage or other media, can be augmented (i.e. shortened, regionalized, animated, “call to action” added, etc.) to deliver results at minimal content creation cost.

A3. Communication Benefits

Digital Menu Boards (DMB) present menu and promotional content in text, mouth-watering photos and video from a centrally-controlled location or through permissioned input from a regional or restaurant level.

“Restaurant owners are looking to take control of their menu boards, maximizing communication with their customers,” said Chris Riegel, STRATACACHE CEO. Digital menu boards are being seen as the new alternative, containing a host of benefits that effectively comply with menu labeling laws through more efficient and cost-effective means, and with greater scheduling flexibility.”

“Video animated menu items on Digital Menu Boards have seen up to 65 percent increase in sales over static posters” notes Riegel, adding “One of our customers saw sales double over a two-week period when promoting gift cards on their Digital Menu Boards.”

The high costs and logistics related to menu changes are significantly reduced resulting in cost savings and better control of brand communications. Messaging can be easily customized to restaurant locations including products offered, pricing as well as the customer language and pallet. “Spicy” to the mid-west consumer for example may not be spicy or “hot” to the southern location patron.

Current DMB users are benefiting from cost-effective “day-parting” in changing menus at meal times and even micro day-parting to better promote products between major meals or visit segments such as mid morning and afternoon and after evenings. 2-3 menu day-parts are common with 6-7 often being used for

Very large increases in revenue have been realized

Menu Dayparts maximize revenues and suggest snacks

time-of-day promotions. Messaging in one day-part can easily encourage visit at other times of day, or promote gift cards, catering, events or party orders.

DMB and digital promotion boards can illustrate involvement by the location in the community with information about sponsorship, local fund-raising activities and acknowledge staff. Job applications can be increased as required.

As the requirement to display caloric, nutritional or other information (i.e. allergy alerts or food ingredients) increases, DMB enable display of this information while serving the product promotion needs of the chain and its franchisee.

Beyond the cost savings, dynamic flat panels modernize the environment, increase their attractiveness as a “destination” by groups and preferred customers, and offer the ability to test new ways of messaging that can further maximize promotional value.

Great value in “moving the needle” comes when the DMB is used as a tool for merchandising, promotion and ambiance.

Dynamic Place-based Media responds directly to the growing needs for communications cost-effectiveness, innovation, efficient information provisioning, public safety, administrative efficiencies and social networking.

The following are some of the benefits typically delivered through the use of dynamic digital signage.

Increase Revenues

- Present products and menu combinations suitable to the time of day
- Promote the next meal visit
- Introduce new menu items
- Support supply partners
- Present specials and specialties
- Upsell additional menu items
- Promote gift cards, catering, pre-ordering, events and take-out
- Reinforce community involvement

Reduce Costs

- Decrease the cost and time required for printing, distribution, posting and disposal
- Increase “compliance” while minimizing information posting requirements
- Comply with caloric and nutritional information requirements
- Promote products based on outside temperature inventory levels and other factors
- Reuse brand assets such as product photographs, logos and tag lines

*Flat panel
modernize a
location and
increase its
attraction*

*Multiple
benefits are
realized*

- Present visuals that align with the theme of the location or calendar events
- Reflect regional tastes (i.e. spicy-ness)
- Generate job applicants

Improve the environment during the visit experience

- Reduce perceived waiting or visit times
- Increase visit frequency
- Make the location a destination
- Provide Info-tainment
- Add or modulate the energy and vitality of the location at times of day
- Reflect community involvement
- Amplify key brand messages
- Refresh, modernize, “green” and “de-clutter” the environment
- Observe key dates (i.e. Independence Day, Martin Luther King Day, etc.)
- Provide local recognition and accolades (i.e. employee of the day, week, month)
- Promote special occasion visits (i.e. Valentine’s Day, etc.)

Improve customer engagement in other media

- Trigger/motivate mobile communications such as downloads, mobile browsing, mobile commerce and messaging (including email, text, SMS, QR Codes)
- Generate “earned” media (i.e. Facebook “likes”, referrals, Tweets, etc.)
- Generate increased web site traffic

*ROI and ROO
are both served
by dynamic
media*

The wide range of benefits that can be achieved through dynamic place-based media⁸ allow communicators and marketers to enjoy numerous points of value to provide high Return on Investment (ROI) and Return on Objectives (ROO)⁹. Messaging should consider the primary, secondary and tertiary objectives.

The “Millenials” demographic group was born between 1982 and 2002 and, being the first generation in American history to exceed 100 million members is particularly media fluent, while being a key demographic for many food services providers:

- Not only do they spend money on themselves, their family and friends, but they also influence the purchases of the people around them. College

⁸ The business and communications benefits that can be achieved by dynamic media are included in a separate paper available at www.LyleBunn.com titled “The “Why” of Digital Signage.

⁹ The term Return on Objectives (ROO) is used when benefits are difficult to quantify (i.e. reducing paper clutter, adding vitality, modernizing, etc.)

students across the US account for about \$170 billion in annual spending, and that includes their own as well as their parents' money.

- By 2010, this Gen Y population will account for about 32% of the total population; they will be the next dominant generation of purchasing Americans. If they become loyal to a brand, they present an enormous lifetime value in potential revenue for that brand.
- The majority of them grew up in dual-income families and that translates into more sophisticated tastes in clothing, dining and recreation. They also grew up in a media-saturated, brand-conscious world (i.e. they were raised as consumers). These attributes make them a great advertising opportunity for “entry level” luxury brands in particular.

18-24 year olds are highly aware of dynamic media

Research conducted by OTX Research indicates that awareness levels of digital signage are high for the 18-24 year old demographic and that it drives action for this audience, who are the early adopters of technology and new media.

- 70% of 18-24 year olds are aware of digital signage that they have seen in the past 12 months
- 27% of 18-24 year olds took an action based on the last time they saw advertising on digital signage.

Importantly, Millennials are at the beginning of a lifetime of major purchases (i.e. home, vehicle, vacations, recreation, etc.) and consumer brand selection and usage.

A4. “Owned” Media in the “Paid-Owned-Earned” Media Model

The menu board is the “zero moment of truth”

The food service location is ground zero, the front line, forward operating theatre or “zero moment of truth” on the path to purchase. Where other communications devices serve to generate traffic, brand awareness and loyalty, on-location signage must achieve revenue activation while motivating future visits.

Marketers currently think of communications within the Communication Continuum Media Model whereby the attributes of each communications device can be used (i.e. exploited) to best achieve business goals, while contributing to the sustainable achievement of goals.

Operating within the “communications continuum” many brands/marketers are increasingly looking to their “owned” communications devices such as their website, mobile app and on-premises dynamic signage to achieve their revenue, branding and re-visit goals. “Owned” media helps fuel “earned” media such as opt-in, referrals, positive word of mouth, “likes” and social media benefits.

about publishing messages, information and stories to those that you most want to engage with and with you”. Dynamic on-location media is a transition from passive marketing to more successful active marketing... Digital and the enabling analytics are a “bolt-on” utility that can typically be added easily to existing infrastructure and available space, and can deliver immediate results and insights”. It is a high payback medium,” he said.

Joel characterized the broadcast media of TV, cable and print as passive, detached and physical in comparison to the active, connected, virtual and high engagement nature of interactive media.

*“It works –
Lets go!”*

“We’ve used it – it works – let’s go!”: In recognition that dynamic signage works well when properly applied, end user executives are increasingly charging their staff and advertising agencies with integrating dynamic place-based media into their plans, campaigns and their services. The timing of this end user executive focus is coincident with agencies’ struggles. As agencies offer niche services or are “service silo-ed” in their service, they wrestle with media integration and their contribution to multi-channel, omni-channel marketing while being aware that their competitors are seizing new revenues through dynamic media.

“Us too!” projects are proceeding at a rapid rate as a natural response to consumer expectations and because it’s use is visibly evident by competing organizations. While the “innovators” and “early adopters” tend to share little information about the business benefits that they are deriving, their success and confidence in dynamic place-based media is evidenced by its increased use.

“Owned” media in the “paid-owned-earned” marketing media mix provides high value and high leverage of marketing communications investment.

B. FOOD SERVICES MESSAGING

B1. Nutrition Regulations

A current challenging aspects of communications by food services providers is the requirement for nutritional labeling on menu boards¹¹. In its apparent intention to accommodate all interests, the act currently addresses the posting of caloric information, though this could be leading the way to the required posting of other information related to nutrition and food composition including for example gluten and allergens.

*Menu labeling
requirements
expected in
2013*

The Food and Drug Administration (FDA) issued proposed regulations in April 2011 for nutritional information on menus, which are expected to take effect in 2013, applying to chains with 20 or more locations. The national law will supersede conflicting state and local regulations, limit restaurant liability and

¹¹ See <http://www.fda.gov/Food/LabelingNutrition/ucm217762.htm>

establish a uniform standard for how chain restaurants make calorie and nutrition information available.

On March 23, 2010, the President signed the [health care reform legislation](#) into law¹². Section 4205 of the Patient Protection and Affordable Care Act of 2010 requires restaurants and similar retail food establishments with 20 or more locations to list calorie content information for standard menu items on restaurant menus and menu boards, including drive-through menu boards. Other nutrient information – total calories, fat, saturated fat, cholesterol, sodium, total carbohydrates, sugars, fiber and total protein – would have to be made available in writing upon request. The Act also requires vending machine operators who own or operate 20 or more vending machines to disclose calorie content for certain items. The FDA has issued a [Federal Register notice](#) that explains how restaurants and similar retail food establishments with fewer than 20 locations and vending machine operators with fewer than 20 vending machines can [voluntarily register](#) to become subject to new federal menu labeling requirements.

The menu labeling bill exempts small businesses and does not apply to daily or temporary specials and customized orders. It requires the U.S. Food and Drug Administration to propose specific regulations not later than one year from now. Those regulations will be finalized through a formal rulemaking process, and the FDA must make quarterly reports on its progress to Congress.

Federal regulations will preempt – override state or local laws

Similar measures are already in effect or are awaiting implementation in California, Maine, Massachusetts, New Jersey, Oregon, New York City, Philadelphia, and a dozen other localities, however the federal standard will preempt state or local laws regarding chains with 20 or more locations.

The Center for Science in the Public Interest (CSPI) began pressing for nutrition labeling at chain restaurants in 2003 and have called the bill's passage "a huge victory for consumers". New York City became the first jurisdiction to enact menu labeling, via regulations issued by the city's Board of Health, in 2006. California Gov. Arnold Schwarzenegger signed that state's menu labeling law in 2008. The National Restaurant Association (NRA) dropped its longstanding objection to menu labeling last year and supported the language passed by Congress.

"The passage of this provision is a win for consumers and restaurateurs," said Dawn Sweeney, National Restaurant Association president and CEO. "We know the importance of providing consumers with the information they want and need, no matter in which part of the country they are dining. This legislation will replace a growing patchwork of varying state and local regulations with one consistent national standard that helps consumers make choices that are best for themselves and their families."

¹² See <http://www.gpo.gov/fdsys/pkg/FR-2011-04-06/html/2011-7940.htm>

The proposed requirements for restaurants and similar retail food establishments include:

*Calorie ranges
for
combination
meals*

- Establishments with 20 or more locations, doing business under the same name and offering for sale substantially the same menu items. This applies when the establishment presents itself as a restaurant or greater than 50% of the establishment's total floor area is used for the sale of food.
- Calories would be disclosed on all menus and menu boards, including menu boards at drive-through locations. The term "calories" or "Cal" would be required to be posted on menus and menu boards next to the number of calories.
- Calorie information would be displayed clearly and prominently
- Calories for variable menu items, such as combination meals, would be displayed in ranges. An example for a combination meal could be a choice of sandwich, side dish and beverage.
- For food on display, calories would be listed per item or per serving on a sign next to the food.
- A succinct statement concerning suggested daily caloric intake would be posted prominently on menus and menu boards to help the public understand the significance of the caloric information provided on the menu or menu board. The proposed statement is "A 2,000 calorie daily diet is used as the basis for general nutrition advice, however, individual calorie needs may vary".
- A clear and prominent statement would be posted on menus and menu boards that states that additional written nutritional information is available to consumers on request.

*Campus legal
suit related to
inadequate
menu labeling
has \$50,000
settlement*

Settlement details in a suit related to food labeling are outlined in an article¹³ by Melissa Ezarik titled "Food (Allergy) Fight: Safe Student Dining a Right." The legal action was undertaken by an unnamed number of students who sued Lesley University (8,300 student enrollment) for not providing adequate/safe dining options for them.

Leslie University agreed to pay \$50,000 in compensatory damages to previously identified students who have celiac disease or other food allergies in a settlement reached under the Americans with Disabilities Act, which prohibits discrimination against individuals with disabilities by public accommodations, including colleges and universities, in their full and equal enjoyment of goods, services, and facilities.

The University agreed to display notices concerning food allergies and identify foods containing specific allergens in addition to a number of food availability, handling and staff training measures.

¹³ This section includes parts of the article by Melissa Ezarik. For the full article see <http://www.universitybusiness.com/article/food-allergy-fight-safe-student-dining-right>

*Organized
groups driving
legal action*

Campus dining services departments and dining service providers have made strides in recent years to accommodate people with food allergies, as awareness grows about how an autoimmune response to certain foods may include symptoms as serious as anaphylaxis, which untreated may cause death. “In recent years, we’ve noticed more schools changing their approach to food allergy management by implementing improved procedures to help keep students with food allergies safe at campus dining service establishments,” says John L. Lehr, CEO of Food Allergy Research & Education¹⁴. He hopes the Lesley case “will prompt all colleges and universities to take a look at their own procedures to ensure they are implementing safe protocols to help students with food allergies have a safer college experience.”

The Celiac Disease Foundation’s chief operating officer, Marilyn G. Geller, called the settlement “a great step forward.” From her perspective, there is more awareness of celiac disease, in which the small intestine sustains damage and other health problems may result when foods containing gluten are eaten, but change is slow. “Cross-contamination is still an issue,” she notes.

While individuals with food allergies coming to campus tend to interact with the dining services and/or residence life offices first, the Lesley settlement will likely result in campus disabilities services offices getting more involved. Still, says L. Scott Lissner, president of the Association on Higher Education and Disability (AHEAD), “most individuals with food allergies, including students with celiac or other serious conditions, don’t think of themselves as having a disability.” Historically, disability services offices would be contacted by dining or residence life officials in cases of highly sensitive individuals (such as those with peanut allergies) or when an issue couldn’t be worked out, adds Lissner, the ADA coordinator in the Office of Diversity and Inclusion at The Ohio State University. The Lesley situation “won’t cause a rash of unsupported requests [to these offices], but I do think it will increase requests,” he says. In addition, he predicts, those involved in AHEAD may well “see an uptick in conversation and collaborative reviews of policies.”

*More
conversations
expected*

Lissner suggests campus administrators make students aware that both the dining and disabilities services offices can be informed about serious food allergies. As for the need to make changes on their own campuses, he says the settlement doesn’t mention anything that “seems particularly difficult for colleges.” In addition, “they’ve left room for colleges to fall back on, ‘We don’t believe we can safely accommodate you in your dining facilities. Here’s an option: We can let you off the meal plan.’”

Yet, officials may want to keep in mind the full college experience. “Dining services are a part of our social and educational program,” says Lissner. “If I want to eat in the café by the law school, making me go eat at the allergy-friendly café

¹⁴ Food Allergy Research & Education was formed in late 2012 by the merger of the Food Allergy & Anaphylaxis Network and the Food Allergy Initiative.

on the other end of campus is not very easy to do. ... As dining halls have changed into dining services, the service needs to be accessible.”

B2. Digital Menu Boards

*Menus must
inform,
promote and
inspire*

Many examples exist for the digital menu boards as food services providers have commenced broader deployment based on their early success and learnings from the use of individual promotion boards.

The ability to display up-to-date information and product images at the order counter, with a minimal effort or business disruption make it a powerful revenue generation and compliance tool.

Message content on the digital menu board must inform, promote and inspire in order to activate the sale at the order counter, while generating the intention for a future purchase.

B3. Promotion Boards

The combination of promotion and menu board was used very successful by McDonalds in their launch of the McCafé beverage line through the deployment of dynamic display boards in 12,600 locations by Stratacache¹⁵.



At the 2011 National Restaurant Association conference, Chris Riegel, CEO of Dayton, Ohio-based Stratacache, and Dan Williams, senior director of retail marketing at McDonald's, discussed the project at in a conference session "McCafé Digital Menu Boards: An Ideal Blend of Ingredients for Maximizing ROI."

The McCafé digital menu board project has been the largest in the world in terms of number of devices, number of locations and overall project schedule. It is a complete system and service software to media player to support, and presents the entire menu, pricing and caloric information where applicable.

Williams outlined the benefits including, reduced print-related costs, the “green” approach noting that the menu boards are "ultra low" power devices, which decreases costs and is more environmentally friendly “while bringing products to life” - more than a two-dimensional static menu signage.

¹⁵ As reported at http://www.digitalsignagetoday.com/article/181495/NRA-2011-McCaf-digital-menu-board-project-largest-in-world?rc_id=168

“Restaurant owners are looking to take control of their menu boards, maximizing communication with their customers,” said Chris Riegel, STRATACACHE CEO. Digital menu boards are being seen as the new alternative, containing a host of benefits that effectively comply with menu labeling laws through more efficient and cost-effective means, and with greater scheduling flexibility.”

Messages at the entrance to the ordering area help establish order intentions

The waiting area of a fast-casual establishment or in the case of food courts, cafeterias or similar locations, at the entrance or nearby high traffic areas can effectively promote products and specials while maximizing order value.

Promotion boards are also useful to promoting and profiling offers, events and personnel, as well as expressing community participation and contributions.

Promotion board messaging through Quick Response (QR) or other codes can enable mobile phone interaction.

B4. Other Uses

Dynamic signage has many uses in food services, to achieve a wide range of goals related to revenue achievement, cost reduction and patron experience.

Info-tainment: The combination of information and entertainment provided on modern flat panels in the dining area improves the branding and attractiveness of the quick-serve or bar environment.

Dynamic signage has many uses in food services, to achieve a wide range of goals

Drive through: Digital menu board and promotion board use applies to the drive-thru. Placing LCD displays outdoors can be challenging due to weather elements (i.e., direct sunlight, temperature, humidity, wind and precipitation) as well as other hazards, such as animals, vandalism, but the use of enclosures and suitable display capabilities (such as those available from LG Electronics) allow these challenges to be met.

Order Confirmation: The opportunity to upsell through the suggestion of additional menu items is a natural extension of the order confirmation display. The inclusion of an appealing product graphic of the item(s) being promoted adds appeal, while driving this from the order entry database can assure suitability of the suggested addition to the menu.

Queue System Caller: While waiting to be seated, patrons of casual dining restaurants can be anxious about hearing their name called. A Queue System Caller use of dynamic signage can provide a visual notification of their queue standing and call the party. But, given the attention on this message display, it offers the opportunity to suggest menu items, introduce new items and promote specials, combinations, drinks, appetizers and deserts. Upcoming events and entertainment can also be promoted, all of which can add revenues and increase visit frequency while improving the visit experience for the patron.

Pick-up Notification can be integrated into a promotion board, through which a future visit can be encouraged or “bounce-back” into the order line for additional items can be motivated.

Cooler doors: When bottled beverages, salads or other refrigerated products are in view of customers, transparent dynamic images presented on the cooler doors can attract the attention of patron and serve as a “silent sales-person”. The “PrimaSee” product from Stratacache is an example.



Table-tablet and Smartphones: The use of a tablet at the table for browsing the menu, wine or spirits list responds to the patron need for pre-ordering information. A new study from Technomic on consumer-facing technology¹⁶ based on 2012 interviews of 500 adults aged 18+ shows, especially if it will speed up the process of getting their meal or paying their bill, consumers want to see the new technology they use integrated into their dining experience. As noted in an article by Carol Tice, a contributor to Forbes, some restaurant chains have been innovating with digital media.



Play Area Media: Gestural interaction with play media offers the advantages of reducing the expense and liabilities of climbing structures, while enables those in the play area to remain and view and to interact with others in the play area.

Branding and promotion can become part of the play-area experience as for example, players “kick” a virtual brand logo-bearing soccer ball or effect branded icons in the play area.

Public display gaming: Using dining area display with mobile phone interaction holds the promise of fun and brand promotion. Trivia games (single or multi-player) can add to the appeal of a location offering adult “play,” and anonymous interaction.

¹⁶ http://www.technomic.com/Reports_and_Newsletters/Industry_Reports/dyn_PubLoad_v2.php?PID=121

Photo/message display: Enabling staff-generated photo or messages to be displayed in the dining area can add value to the patron/party visit. “Curating” (i.e. reviewing and approving) user-generated content such as photos or messages (i.e. text, tweets, etc.) can be onerous and requires careful consideration.

*Patrons at QSR
pour their own
drinks and
clear their own
table – why not
self-order...*

Kiosk ordering: Kiosks have added to the convenience of banking, airport and hotel check-in, and while “service” is part of the quick serve restaurant experience, kiosk ordering has had limited use to date. Kiosks offer the potential to empower the patron’s ordering experience while reducing incorrect orders and perceived waiting times. Menu selection from the kiosk can easily include upselling approaches.

Where customers are now used to pouring their own drinks and also being given an order number for pick up, the kiosks can become an extension of the staffed order entry terminal at the counter. The kiosk need not be placed near the order counter or even in the restaurant location, adding convenience to the patron who wishes to simply order from a remote location and then pick-up.

Self-order by patrons using order/payment kiosks offers the potential for counter staff reduction by restaurant operators, with the inherent cost savings related to hiring and training. The option of a self order kiosk can minimize patron “walk-away” when they see long order lines at peak times, in particular given their awareness that their order is being placed with the kitchen based on their confirmation. Kiosks customers can perceive that they are faster than a counter order-taker.

The ability to upsell through order kiosk interaction is clear. Jonpaul Leskie, president of Geneva Enterprises and a Hardee’s franchisee noted in an industry article that the average ticket price increased by 18% (\$1.82 per check) when orders are placed at a kiosk, as opposed to the counter.

Ordering by mobile: The mobile phone is becoming an option for ordering using mobile applications or other mobile commerce. Noah Glass, founder and chief executive officer of text-ordering provider GoMobo, which serves Dunkin’ Donuts, Papa John’s, Popeyes, Quiznos, Subway and others notes that “with over 233 million active mobile phone accounts in the U.S. alone” this business process has significant potential. Improvement to the mobile wallet approach and the ability of restaurants to extend their walls into the digital world offers great appeal. “As more of our customers are integrating the iPhone and iPod touch into their everyday lives, Pizza Hut wants to be right there with them,” said Brian Niccol, chief marketing officer with Pizza Hut. “The App Store application allows us to help customers place orders in a way that best fits their mobile lifestyle.” Domino’s Pizza is so far along with it, they recently introduced their Spanish-language mobile-ordering app.

*Order by
mobile can take
place on
location.*

Staff training – corporate messaging: The system for patron and customer communications can be used for in-house management updates, staff training, motivation and corporate communications, augmenting (or replacing) existing approaches. This is especially valuable in situations where providing information to site managers or staff is important to minimizing the negative impacts of customer perception based on mass media reporting.

C. KEY DESIGN CONSIDERATIONS

C1. Elements of Design

RAS-able is essential in system design and sourcing

The core criteria in dynamic signage system design are those that serve as the basis for all technology-based operational systems. It must be *reliable, available* and *scalable*. “RAS-able” is the short form used by technology professionals, who value proven technologies and suppliers suitable to enterprise application.

Elements of a dynamic signage system include:

a) A software control system called the Content Management Software (CMS) that is used to ingest and author content, define the location and times when content will be presented and control media layout. As the “brains” and primary operating system of the dynamic signage, the CMS should be selected to assure cost-effective and highly functional system operation. Design and selection criteria typically includes areas such as the following:

1. On-system Content Authoring
2. Media Ingest and Handling (formats, feeds)
3. Digital Asset Management
4. Playlist control in Multi-zone Layout
5. Playlist Access & Control / “Local” input
6. Display Grouping and Control
7. Handling of Data Feeds and System Interface
8. Media Transmission Options
9. Compliance Reporting
10. Demands on Display hardware, Media player and Connectivity
11. Ease of Use
12. Source of Supply (direct vs. reseller)
13. Training Requirements and Support
14. Licensing Fees & Structure
15. Stability of Software Supplier

Software criteria have been well proven in dynamic signage

The CMS software is fundamental to the integration of the dynamic signage system with other operating systems that could impact the content strategy such as interface with inventory, point of sale or other systems.

b) Connectivity is required between the central media control location and media

player(s) at the playout location(s). This can include in-house intranet connectivity but commonly includes DSL, cellular, satellite or datacast capability dedicated to this important application. Reliability, throughput and pricing are key criteria.

- c) Media players at the playout location typically store pre-defined playlists and associated media, accommodate “local” input and direct intended media for playout. Key criteria include the ability to drive the required media, expected service life, cost of operation and pricing.
- d) Display devices are typically flat panels of 7 to 60-inch Liquid Crystal Display (LCD), plasma or more energy efficient Light Emitting Diode (LED) panels. Other devices include LED boards, projection and tablets. They can be stand alone or “tiled” as a multi-display layout, and mounted in either landscape or portrait mode. Primary criteria include long-term reliable operations, in particular considering the long hours of operation, capitalization term, and the challenging environment of heat and airborne particles in which the display must operate.

Displays must be business grade

Bruno Pupo of LG Electronics, who has served many food services and other deployments says “connectivity, lock-out controls, refresh/wash capabilities (to correct image retention), warranty period and ease of installation/replacement are equally important to how the display looks, which includes thickness, width of bezel and other factors”. He adds, “Given the duty cycle of this critical element of the network, it is essential that displays suited to this use be designed into the system”.

“Display devices used outdoors, such as drive-through”, says Dan Smith of LG Electronics, must be able to accommodate harsh weather and environmental conditions, direct sunlight, vandalism and animal threats while delivering reliable, high quality, long-term performance.”

The display device is the face of the dynamic signage system and of the enterprise.

- e) On-location system design will include fail-safe and redundancy approaches to accommodate any failure of connectivity, media player or flat panel.
- f) The installation process must accommodate hours of operation and offer a high quality visual appeal as wiring and elements are hidden from view while assuring that system elements are securely anchored, straight and integrated with other design elements of the location. Process elements include coordination of the pre-installation planning, staging including pre-loading and pre-configuration of required elements, as well as installation scheduling, testing and “go-live” that minimizes business disruption or the need for multiple visits.

The installation must reflect the character of the brand in being “clean” and tidy

g) System health monitoring is essential, through which the need for intervention can be taken or even predicted. System support is commonly considered within three levels including:

Escalating levels of hotline support are needed

- Level 1 Hotline (1-800) call in, through which an end user at the location can be part of problem identification and resolution.
- Level 2 Remote Intervention through control center diagnostics, intervention, reporting and escalation.
- Level 3 “Truck Roll” during which live on-location intervention or replacement of system elements such as media players or flat panels take place.

System design should be guided by the following criteria. These will help food service providers to minimize the time and investment needed to implement and use the medium while assuring maximum return over time.

1. Focus on upsell, cross-sell and revisits. All elements of the dynamic signage must focus on achieving the fundamental goal of merchandising and promotion for revenue achievement. While compliance to regulations (such as posting nutritional/caloric information) and other benefits can be realized, the use and optimization of the medium must be on maximizing the customers’ intention of spending, eating and enjoying – to the benefit of the establishment as well.

2. Involve the Team and optimize. Customer facing dynamic signage effects all elements of the business including marketing, store operations, customer experience, purchasing, information technology, human resources, venue design and other operations as well as franchisees, suppliers, partners and others. Each part of the organization will have its unique input towards making the best use of the new signage. Under strong project leadership, inputs should be welcomed on an ongoing basis so as to optimize the value and benefits, while assuring that the dynamic signage fits within an overview intention of customer experience and maximizes revenues.

Stakeholders should provide performance indicators based on their area of greatest need and concern. These can provide useful analytics and metrics about the signage performance along with possible ways of improving the benefits.

3. Software makes dynamic media happen. More than 250 different Content Management Software systems exist, each offering different benefits and approaches and supplier strengths. Minimal systems simply publish images in the way that Powerpoint is used for a presentation. When selecting software, assure that maximum flexibility and capability is available in order to assure that ongoing operation costs are minimized and the software will not limit the way that the dynamic signage can provide value. An un-informed selection can minimize benefits, scalability and investment value while eroding project

Software drives the success and economical operation of dynamic place-based media.

credibility. Mistakes in software selection can result in considerable expense and the loss of credibility and viability of the dynamic media initiative.

4. Business-grade flat panel displays. Dynamic signage operation in a food service facility can be very demanding due to long hours of daily use, heat, humidity and airborne particles. Technology elements such as the media player and display need to be able to withstand long “duty cycles” of flawless operation in presenting the content that will deliver business value. In doing so, the “total cost of ownership” will consider warranty and replacement, redundancy and the ability to monitor and calibrate signage performance. All displays have an embedded “duty cycle counter,” which, when reviewed can result in voiding of the warranty where the display is used for purposes not intended. Consumer-grade flat panels for TV watching are designed for a typical use of 4 hours per day, whereas business grade flat panels are designed and covered by warranty for periods that typically exceed more than three years of 18-hour day usage.

Decisions should be made with consideration for “the big picture”

5. Start how you plan to finish. Starting with a pilot program or proof of concept phase is useful to working through content approaches, integration into the environment and assessing impact, *AND*, the project should be planned with the ability to phase-in new elements easily. Defining the likely future usage scenario assures that the initial investment is best made while providing the ability to scale the project as greater benefit can be achieved. In starting by identifying possible best uses and integration with other communications, customer engagement and operational elements, the initiative can get started while moving continuously to improve the way that the displays are used, how they achieve intended goals and exploit economies of scale and efficiency in operations.

6. Leverage the Dynamic Signage technology platform. The Content Management Software (CMS) payout “module” resident on the media player is linked (i.e. twin-ed) with the central CMS management elements, making a breach of display security impossible. Operating aspects of the display such as on/off, brightness, audio, etc. are typically centrally controlled. This core design feature enables the connectivity to be applied for other purposes.

Dynamic signage infrastructure can be used for other purposes

Customer engagement and the appeal of a food services location can be enhanced when, for example, the connectivity element of the dynamic signage is multi-purposed.

During the January 2013 National Retail Federation conference, Stratacache, a provider of scalable, high-performance dynamic signage, content distribution and enterprise video acceleration technologies, showed its latest Web caching solution called “Retail Cache”



Retail Cache is designed to offer consumer visit locations such as food services, retail, banking and other consumer engagement locations new ways to utilize tablets in-store without encountering slow, unreliable Internet connectivity.

The Retail Cache alleviates network consumption and enhances the in-store or on-location web browsing experience for consumers and employees by making website content available to customers at the local, in-store wireless network speed, providing much faster speed connections. Retailers have the option to pre-populate the cache with specific content their customers want, delivering the most bandwidth-intensive applications to dozens or hundreds of online shoppers at once, the company said.

Web browsing capability keeps consumers coming back

"In today's digital age, customers are using in-store tablets to browse mobile catalogs, order out-of-stock products and complete sales transactions, however the advantages of providing in-store access to Web-based marketing and sales material is lost if the online experience is slow or unreliable," said Chris Riegel, CEO of Stratacache. "The Retail Cache overcomes this challenge, delivering website content at the local, in-store wireless network speed for a faster Web browsing experience that keeps consumers coming back."

7. Consider the Value of Using the Dynamic Signage platform for Near Field Communications. Dynamic signage serves as an on-location technology platform. Since the media player/display are in a prominent location and are served by electrical power and connectivity, connectivity approaches such as WiFi or Near Field Communications (NFC) can be easily "saddle-bagged" to or operationally integrated into the dynamic signage device. Mobile device promotion and information provisioning serve as the basis for handheld engagement and a digital relationship that could include loyalty, rewards and cashless payments.

Robert P. Sabella, founder and CEO of OTA Training, LLC, a global leader in Radio Frequency Identification (RFID) and Near Field Communications (NFC) training and certification noted recently¹⁷ that "the restaurant industry is seeing the emergence of new near field communication (NFC) solutions providers as well as the launch of mobile applications designed to streamline the dining (and diner's) experience."

¹⁷ See https://www.nfcbootcamp.com/nfc-next-on-the-menu/?goback=.gde_1225757_member_212394243

He adds “The placement of NFC tags throughout establishments, on smart posters, in storefront windows, and even on menus, will enable customers to check-in or opt-in using their smartphone, to be notified when their table is ready, to receive personalized discounts, to request an appetizer or drink while waiting all through a mobile application. Once seated at their table, restaurant patrons can then tap an NFC tag (or scan a QR code) placed on the menu, table tent or in the coaster. Patrons will then receive special promotional information, nutritional content, request the assistance of the waitress or even have their check delivered to make contactless payments.

Juniper Research forecasts that NFC retail payments will surpass \$180 billion globally by 2017.

Starbucks mobile app has added to loyalty customer numbers

According to Starbucks CEO Howard Schultz, the company’s gift card accounted for 25 percent of U.S. tender and was likely the most popular gift item of the 2012 holiday season, with more than \$1 billion loaded onto cards in Q4. With more than 7 million customers using the mobile payment app—equating to 2.1 million weekly mobile payment transactions—roughly 20% of card transactions occur via mobile devices. In addition, the integration of Starbucks’ loyalty card with the mobile app added nearly 1.4 million members so far during first quarter of this year alone, up 86% from Q1 2012.

“Closed-loop” systems exist that include message presentation based on dynamic signage proximity, mobile opt-in, coupon offer and redemption with analytics at each step in the commercial process. In the case of iSign, the Intel AIM Suite of Anonymous Viewer Analytics is integrated with the digital signage Content Management Software System to direct an offer based on the demographic profile of a shopper at the check-out counter.

Closed-loop systems, as offered by iSign or Wave2Save leverage the display platform. No character entry or scanning of a QR code is needed to activate engagement, although these can be used. The mobile device is detected using Near Field Communications (NFC), and the experience is multi-sensory with a cell phone vibration, visual or auditory note including making a distinctive sound during wave or cheering when offers are redeemed. Similar systems are available from other providers of mobile marketing platforms.

C2. Business Considerations

Dynamic signage must integrate with business realities and past activities

Others are enjoying extraordinary value through their innovative use of the medium and other food services providers including quick-serve, fast casual and cafeteria are moving forward in their use of this proven medium for cost savings, greater revenues, reduced perceived wait times, flexibility and ambiance offered by electronic digital displays.

Aggregation. As large food services providers seek to establish a corporate approach, often replacing or trying to leverage initiatives that have been

undertaken by operating managers or franchisees, there are particular challenges. Nobody wants to lose the value from past investment, yet want to take advantage of improved approaches that could be available. Good planning can define the optimal technology, re-purpose existing infrastructure and define the best approaches to achieving goals at multiple organizational levels.

All stakeholders must support brand building

Harmonizing entrepreneurial zeal. Few industries equal or are such a expression of the entrepreneurial zeal of franchisees and managers in the food services industry. Franchises and operating managers have often moved forward to benefit from dynamic signage. In doing so, investments have been made and usage approaches have been developed. Unfortunately, this has at times, been at the cost of consistent brand presentation.

A key business consideration lies in the policies and practices that will enable building of the brand and support the revenue and profitability goals of the local franchisee and managers, while assuring benefit is realized through their past investment and learning. The integration of display technologies that have been previously installed, into an enterprise-wide system is often indicated.

Who pays? The location operator should see dynamic signage as an element of business operations, in much the same light as a piece of food preparation equipment, a staff training program or location décor might be. While the frugal nature of the food services corporation, franchisee or manager is their strength, so too is the power to discern astute and wise investment. The power in wise business consideration is in the assurance of high and growing return on investment.

Suppliers benefit from food location success

Suppliers may offer a source of financial support given the contributions of the medium to their revenue success and branding.

Brand Fidelity and Corporate Media Assets. The use of corporate logos, tag lines, product photos, pricing structures, promotions and other brand assets based on defined policies assures brand fidelity and consistent presentation of the brand in support of its sustained success and growth. A key benefit of the use of a dynamic signage system is support for consistent presentation of the brand. This can circumvent the used of rogue images and pricing while minimizing the requirement for local action to post or remove materials.

Third party advertising. A common expression of entrepreneurial enthusiasm for dynamic place-based media is in the display of advertising paid for by third parties. In the desire to offset costs or generate non-food revenues, site managers have conducted a “business within the business.” Caution is warranted.

Keep the messaging close to core business intentions

While the patron “eyeballs” at the location can warrant some third party ad revenues (typically equal to \$5-10 per thousand patrons per advertiser), this practice can erode the integrity of the brand at the location, confuse or frustrate

patron and take from the revenue achievement potential of food, upsell, gift card or catering sales, when the patron time on location is used to generate other revenues. While paid advertising on eating area display can make sense, the costs of ad sales, “flighting” and accounting can erode the economic benefits. The patron experience, including the audio that ads commonly include, must figure prominently in the decision.

The potential to enjoy merchandising support through financial participation by suppliers benefits both the food services provider and the supplier. Since message display that encourages upsell or cross-selling benefits the location, the brand and the supplier, the business approach to the use of dynamic place-based signage should consider the relationship with suppliers and promotion partners.

*“Owned”
displays at food
service
locations may
deliver better
branding and
revenue growth
than typical
advertising*

Shift marketing investment from “Paid” to “Owned” media and better activate “Earned” media. Since on-location media can increase brand awareness, patron alignment and visit frequency (typical objectives of “paid” advertising), dynamic in-restaurant signage as “owned” media is a strong alternative to external messaging. The ability of “owned” on location media to motivate “earned” media further adds to its value.

The lack of advertising media inventory, excessive rates, sporting strikes or lockouts offer the opportunity to re-examine ad spending and to shift marketing investment.

National Hockey League (NHL) play offers an example. The NHL player strike (ended January 2013) meant that Boston Pizza in Canada had advertising investment not spent on paid advertising. The strike also helped the chain to understand the significance of revenue from hockey fans. The chain recently deployed “owned” dynamic signage in 50 of its locations.

During the 2004-05 NHL owner lockout of players, Tim Horton used non-spent ad money to place a single dynamic promotion board in the middle of its menu panel. It proved very high ROI and has led to fully dynamic menu boards.

As the NHL may be an indicator of what could happen if disruptions occur in other professional sports, brands are well advised to considering their “owned” on-location dynamic media options to exploit the medium, achieve better promotional ROI and mitigate promotional risk.

C3. Sourcing Approaches

Sourcing approaches start with a definition of the marketing, business, communications, interior design and human resources goals to be achieved, preferably specific to target audiences and over periods of geographic and functional expansion.

*The starting
point is clear
definition of
business goals*

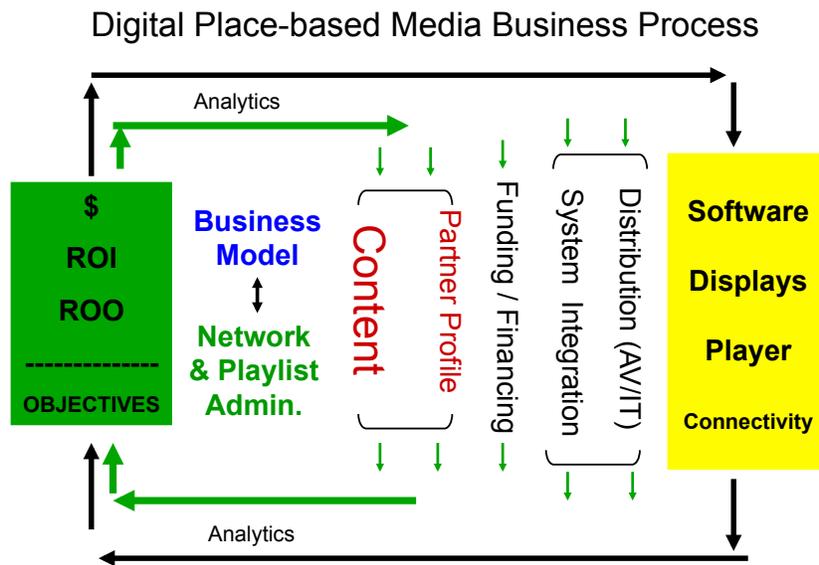
The “Content” required to achieve these goals is then defined, giving consideration for the demographic profile and visit experience of targeted patrons.

Define Objectives, then Content, then Technology

Supplier, promotion partner and third-party advertising can be accommodated but should be carefully considered within the planning framework.

The technology infrastructure required to present the content that achieves the communications goals can then be defined.

"We recognize that there are a lot of questions about what solution is right for the customer and that there is no one-size-fits-all approach for a DMB solution," said STRATACACHE CEO Chris Riegel. "Each customer requires a customized solution based on standard and cost-effective technology that fits their existing space, consumer needs and budget."

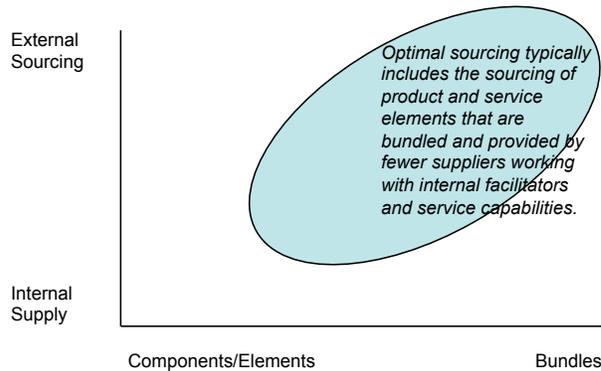


This planning approach of objectives, content and technology suggests sourcing approaches. Suppliers are essential to attaining many required elements and no single supplier provides all the elements needed. In defining the sourcing options best suited to their needs, the end user should ask itself the following key questions:

- To what degree can we leverage that we already have available internally (i.e. connectivity, content) and what must we buy?
- What elements of system design, integration, installation, operations and support do we want to do internally versus outsource?
- To what degree do we want suppliers to bundle required elements so as to minimize design and sourcing efforts and complications.

In-sourcing versus Outsourcing are key decisions

Sourcing Matrix



The benefit is having one prime supplier point of contact – one “throat to choke” and the ease of supplier liaison cannot be over-emphasized. Supply bundles often offer design, operation and purchase economies.

Bundles of products and services offered by suppliers can include some or all of the required elements, but even as these are provided, primary vendors will often in-source or partner with other trusted suppliers in creating or offering the bundle.

An excellent example of product bundling is the LG Electronics EZ Sign package. It includes a flat panel, mount, media player with USB or Ethernet connection, software and content support. This is very well suited to stand-alone or small installations through a Audio/Visual Integrator that can also install this product.

The Content Management Software (CMS) is central to gaining the ongoing value from the use of the system, so the food service provider should first satisfy himself or herself that the software being considered will satisfy their needs. A CMS provider will often bundle or recommend the media player used at the playout location. The software and media player bundle will typically operate with any number of flat panel sizes, models or supply sources.

Make sourcing decisions based on Total Cost of Ownership – including capital outlay and operating costs

Total Cost of Ownership (TCO) including capital outlay and operating costs will indicate best value. Sourcing success is entirely linked to the software selection, as this will drive current and future functionality, usage flexibility and the primary costs of system operation.

Turnkey or complete solutions that include system design, software and hardware technologies, content templates, training, installation, connectivity, network operations, hotline support and even elements of financing support are available from many suppliers. In recognizing that dynamic media is not the core business of a food services provider, the turnkey option should be considered as the preferred option. Economies in sourcing and of operations will typically result.

Gaining supplier engagement. Dynamic signage has been in high growth for over a decade experiencing 50% compound annual growth rate (CAGR) until about 2005 and a 20%+ annual growth rate since then. As such, the most experienced

and capable suppliers have lots of business opportunities, which can make it difficult for end users to gain quality engagement from suppliers including, in particular, good response to a request for proposal. Initial supplier contact is generally responsive with initial marketing information provided as the supplier seeks access to and assesses the opportunity.

Suppliers engage most fully on project opportunities that they believe will move forward to deployment in predictable timeframes and then into expansion.

Invest in some training before engaging suppliers

End users serve their project well when they are able to clearly articulate their project objectives, project phasing and scope and intended timeframes while demonstrating management support. This initial effort is generally easily achieved as a project leader or team draws on information that is publically available (such as this paper, other articles and case studies, education sessions at events and online education/orientation programs such as “SPEED II” available online at www.DSEG.org).

It is not uncommon for an end user to execute a non-disclosure agreement before holding project-related discussions with a vendor in which corporate plans may be disclosed or where significant competitive advantage is expected. Since most vendors work closely with providers of other technology elements, respect for non-disclosure should be reinforced regularly.

Independent Expertise. The bias of suppliers is their strength as each indicates the merits of their solution during their selling efforts. This can cause confusion on the part of the end user, who may be unable to discern the importance or true value inherent in elements of the possible approach and products.

Use independent dynamic media expertise to reduce time, cost and risk

Drawing on independent dynamic signage expertise can reduce this confusion and minimize time, effort, mistakes and project costs. Making dynamic signage “happen” is low risk when some proven planning and sourcing approaches are applied. Counsel by an independent advisor can help move project personnel through their learning curve quickly, generate consensus by the harmonizing of interests, put the project on a productive path and assure that it stays “on track”¹⁸.

C4. Future-Proofing

The ways in which the medium is used can accelerate quickly within a food services environment, so considerations for “future-proofing” the operating efficiencies, functionality and scalability of the defined system assures ongoing improvements in value and return on investment.

As they move forward, they are realizing that a suitable technology infrastructure including the flat panel, media player, connectivity and Content Management Software and other elements must serve their immediate needs while also being

¹⁸ BUNN has assisted hundreds of large and small businesses gain project success.

“future-proofed” to assure ongoing value as the way in which they use this powerful media evolves.

Future-proofing minimizes future costs and enables faster development of system use and value

A number of future use scenarios should be considered in the DMB and promotion board design. Some of these include:

- On system message authoring / composition and dynamic content production
- New approaches to display beyond the Digital Menu Board (i.e. at tables)
- Integration with data feeds/sources such as weather, notifications, socio-economic targeting, event calendars, etc.
- Integration with Anonymous Viewer Analytics and Sentiment Analysis for the gathering of consumer insights or dynamic message provisioning
- Integration with cell phones and mobile devices
- More local or regional input or control. (I.e. community support initiatives, other nearby locations, upcoming promotions)
- Changes in the menu presentation approach including better and more extensive use of motion “visuals” and images and better audience targeting
- More suggestive selling including order combinations
- Use of the DMB and panels for order pick-up notification
- Integration with social media and other “earned” media approaches
- Support for more interaction between patrons and social engagement on premises. (i.e. gaming, trivia contest, etc.)
- Presentation of in-restaurant images of guests (with permission)
- Gaining and/or presenting customer feedback

C5. The “Bliss Point” of Signage

There is a “bliss point” in digital food services menu and promotion board signage at which the food services establishment and their patrons gain the highest possible benefit. As the constraints of static signage are lifted from this under-appreciated medium and dynamic signage is used to enhance revenues and excite customers, this bliss point is realized.

Advertising spending actively supports brand equity and patron traffic generation. This is commonly known as “paid” media.

On-premises signage is “owned” by the facility and offers the opportunity for branding, conversion and upsell at the point of purchase.

The approach to menu and promotion boards is as old as food services itself. A filibuster approach of constantly presenting the same static messaging is commonly used where static signage simply presents always-on product and price information, often lacking any commentary or product purchase inspiration.

The menu and promotion boards of quick serve and fast casual restaurants, bars, cafeterias, food courts and take out locations can deliver higher value to the

establishment and its patrons. “Content” - the messages presented, primarily fulfill this goal based on suitable messaging technologies being in place.

Menu boards typically include a product name, its image and multiple prices based on size. Product and meal bundles typically follow this same construct. Caloric information may be included to comply with new food labeling regulations. A promotional message or tag line may support product promotion or branding.

The establishment expects patrons to buy when they enter the facility, but the signage must maximize order value and contribute to gaining revisit(s).

Patrons base their menu selection on a combination of past experience, current appetite and the ability to spend, along with health-related factors such as calories, ingredients and allergens. Patrons can become increasingly habitual in selecting from a limited range of menu items, which over time, contributes to “meal monotony” and the loss of location revisit and patron-ship.

Dynamic signage overcomes the constraints imposed by static signage, channel letters and chalkboards. This is at a time when consumer choices and their food services experience are increasing and new food menu labeling requirements are emerging. New approaches to menu presentation are needed to keep them coming back and eating heartily.

Static menu and promotion boards are a blunt communications instruments, while dynamic signage can be the sharpest instrument in the revenue achievement tool chest.

LCD flat panels enable the establishment to present video, animated product photos, logos, graphics and text in any combination or layout. The marketers dream of being able to present whatever best speaks to the patron(s) in order to achieve the objective can now be fulfilled through dynamic signage.

Business goals such as increasing revenue, upsell, cross-sell and revisit frequency are achieved at the order counter through content designed to achieve the “bliss point” at which content speaks powerfully to the patron.

At the “bliss point” the product is optimally presented *AND* the patrons are excited for the fulfillment of their need for food as fuel, comfort or as an agent for their lifestyle needs and wants.

Content needs to be shaped scientifically or sculpted artistically to optimally achieve the restaurant revenue goals and appeal to the patron’s sensibilities. The current purchase can be maximized for the benefit of the establishment and a joyful patron order experience can motivate future visit intent.

The term “bliss point” has been a central theme in food and beverage engineering, denoting the optimal level of ingredients required to produce product appeal and magnetism. Consumption gratification that also triggers desire in an ongoing consumption cycle is a primary tool for food company revenues.

This same practice of food design toward a bliss point can now be transposed to point of purchase messaging and easily applied through dynamic signage.

The messaging ingredients can be crafted in such a way as to present the promise of the food product while maximizing its perceived value on the part of the patron by illustrating how it can meet their needs.

The way in which this is accomplished through messaging strategy and tactics is addressed in the following section.

Where the promotion and presentation of a product that fulfills the need of the food services establishment intersects with the patron’s view of the perceived value of these products, digital menu and promotion boards reflect the “bliss point” in food and beverage marketing at the point of purchase.

C6. Content

“Content is never a destination, it’s a journey; it moves and changes as your business evolves” advises Stratacache CEO Chris Riegel.

*Content
achieves the
results*

It is the “Content¹⁹”, the media and messages presented that assure the marketing, business and communications are achieved. There are several primary levels of sophistication in usage, each of which offers increasing levels of value.

Benefits result from the replacement of printed menu and promotion boards with dynamic signage. It is common to replicate or upgrade product images and to include product information and pricing within a visual theme and layout.

Menus and promotional content can be created that reflect product availability, pricing as well as patron tastes and language at each location.

Daypart playloops: Typically three to nine “dayparts” are used in a food services location to focus on products in a given meal/snack period, to suggest menu items and specials at a current time of day or to encourage a future visit. A daypart “playlist” is typically pre-prepared and scheduled with specific playout timing. A “Playloop” presents a number of content “spots” or messages with possible coordination of these across multiple menu and promotional panels.

¹⁹ A guidebook on “Content” is available at www.LyleBunn.com - Resources

Content approaches have many elements which together make each food services experience unique

Templates that assign media types, background and font styles, sizes and colors to areas of the message can dramatically reduce content composition time and effort. The “locking in” of message attributes or availability of a selection of images and tag lines also empowers message composition by local operators, who might also be provided the permission to post their local messages, or over-ride pre-planned or core messaging with location-specific specials or other messages.

Product images can be from a range of vantage points from the top-down platter view to close up. A roll-over effect can bring emphasis to different elements. The addition of animation to product images such as steam rising from hot items, or condensation drops rolling down the side of a container draw the eye to the product shot and motivate interest.

Text animation (i.e. product name, attributes, pricing) with highlighting, fly-in, in sizing or pulsing adds emphasis and gains interest. The rule of thumb is that 1” of font size is required for each 10 feet of viewing distance. Font sizing can therefore be used to enable patrons to stand back while they decide what to order or draw them closer to an order-taker, each in the interest of moving patrons most efficiently through the ordering process.

Core location branding (i.e. static) messages can be added to a display shroud or frame.

Animation that contributes to the overall “balance” of motion and still information presented is unique to the viewing experience. Too much animation is visually demanding and distracting, while too little can be boring.

The color pallet used in the messaging and the background image can be harmonized with the brand, location identity, time of day and other factors.

Include a “call to action”

A “*call to action*” explicitly or indirectly directing a patron to do something such as “buy”, “try”, “visit the site,” “sign up,” “remember”, “take note,” “attend”, “download,” “register”, “visit”, “call/dial,” etc. is easily included on a digital signage spot.

Promotional messages and images can be very effective in viewing durations of between 3 and 10 seconds to profile products, combinations, staff, icons, spokespersons, events and other location news. These are especially useful in reducing the perceived waiting time of the patron, providing something interesting to look at while in queue or at a pick-up location.

Data integration. By influencing and adjusting messages based on business and environmental factors, the content contributes most fully to the achievement of revenue goals. Some examples of data feeds and external input to automated message composition are included in the following illustration.

Weather provides a prime promotional opportunity

Integration of a weather feed (such as is available from AccuWeather) adds information that viewers like, while this can also be used to trigger product promotion (i.e. hot beverages or soup when cold outside, and cold beverages or salads when hot outside). Weather data can also trigger promotional messages such as “At today’s temperature an adult typically needs X ounces of fluids daily”.

Database-driven elements such as inventory levels, pricing, order-building, caloric or nutritional information, etc. enable message composition to be automated. This is a particular strength of the CMS software provided by Stratacache, a sponsor of this “How To” Guide.

Dynamic Content Drivers



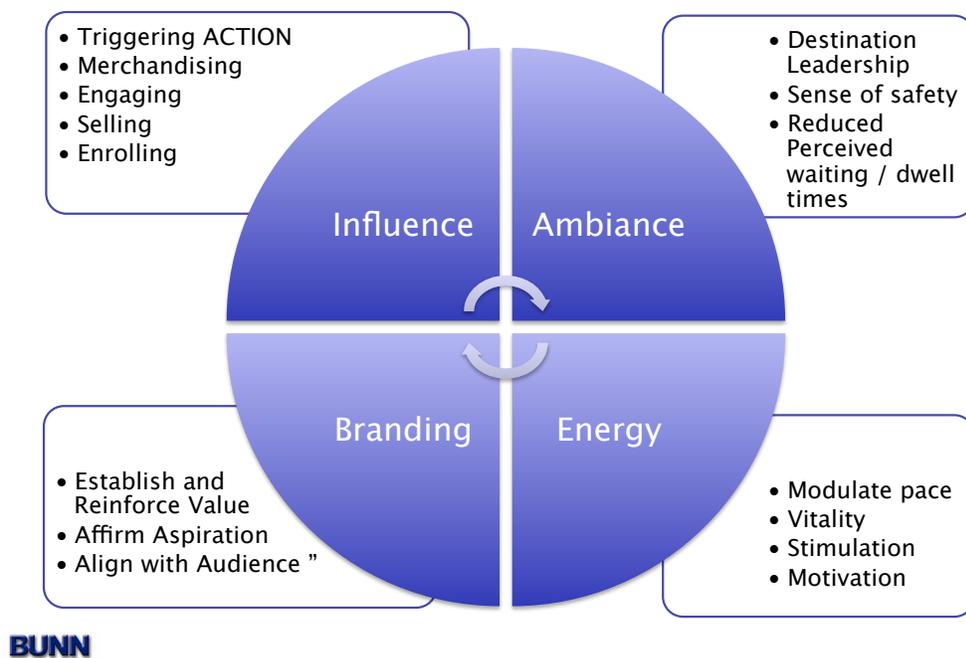
In maximizing the occasion of the visit experience to a location, content that considers business or external factors can maximize achievement of business goals. Some factors include:

- Temperature, wind, humidity, precipitation, weather alerts
- Sports scores – game, Olympic, World Cup news
- Breaking news and safety threats
- Traffic levels (i.e. “traffic is bad... why not stay”)

- Calendar and “clock-based” items (i.e. upcoming events, offers)
- “On this day in history”
- Inventory levels
- Previous or current session purchases
- Campaigns triggered by conditions (i.e. weather)
- Anonymous Viewer Analytics (demographic message targeting)
- Geo-location
- Near Field Communications / Mobile detection
- Twitter and facebook commentary

Multiple goals can be achieved simultaneously through dynamic display messaging, including merchandising and promotion, branding, providing ambiance and vitality to the location, and modulating the pace or energy experienced at the display location.

Multi-Purposed Media – Simultaneous Benefits.



In the “News & Research” section of its website, the National Restaurant Association notes some top menu trends for 2013²⁰. These suggest messages that may add to the branding of the restaurant chain or location, or its suppliers:

²⁰ See <http://www.restaurant.org/News-Research/Research/What-s-Hot>

*Reflect
consumer
concerns and
interests in the
on-location
messaging*

- Locally sourced meats and seafood
- Locally grown produce
- Healthful kids' meals
- Environmental sustainability as a culinary theme
- Children's nutrition as a culinary theme
- New cuts of meat (e.g. Denver steak, pork flat iron)
- Hyper-local sourcing (e.g. restaurant gardens)
- Gluten-free cuisine
- Sustainable seafood
- Whole grain items in kids' meals

Some top drink-menu trends for 2013 include:

1. Onsite barrel-aged drinks
2. Food-liquor/cocktail pairings
3. Culinary cocktails (e.g. savory, fresh ingredients)
4. Micro-distilled/artisan liquor
5. Locally produced spirits
6. Locally sourced fruit/berries/produce
7. Beer sommeliers/Cicerones
8. Regional signature cocktails
9. Beer-based cocktails
10. Locally produced beer

*Content
standards
protect network
operators*

Content and Advertising Standards offer a framework to help assure that the dynamic spot is not perceived in a negative light or tests legality. The American Association of Advertising Agencies (AAAA) has published advertising standards of practice (www.AAAA.org) which direct that no advertising should contain:

- False or misleading statements or exaggerations, visual or verbal.
- Testimonials, which do not reflect the real choice of a competent witness.
- Price claims which are misleading.
- Comparisons that unfairly disparage a competitive product or service.
- Claims insufficiently supported, or which distort the true meaning of practicable application of statements made by professional or scientific authority.
- Statements, suggestions or pictures offensive to public decency.

Standards of practice on digital signage content in the style guide for a network operator, content producer, communicator or advertiser should reflect that content presented on Digital Signage should not:

- Infringe the legal rights (including copyrights, rights of privacy and publicity) of others.
- Cause any damage or disadvantage to others.
- Disturb public order.
- Reflect a criminal act.
- Present or distribute any third parties' private information without obtaining approval from such third parties.
- Disgrace others.
- Defame or libel others.
- Offer digital files for access or download that contain viruses, corrupted files that may damage the operation of others' computers.
- Present unlawful or prohibited information.
- Reflect any other activities that the location provider of the digital display deems inappropriate.

A good way to improve dynamic signage content design and composition is to look at content spots and gauge the ways that you are affected. Be the judge by asking yourself the following while considering the viewing environment:

Learn what works by questioning dynamic signages that you see

- a) What would make the intended message clearer or easier to “take in”?
- b) What was good about it?
- c) Was the value proposition clear?
- d) Was the requested action clearly presented and compelling?
- e) What was a distraction or not essential to the message?
- f) What would you change to simplify or empower the message?

Menu and promotion boards serve as a primary face of the food services provider location, while contributing to revenue achievement goals and cost containment. The area of “content” is one in which the use of dynamic media merits attention by the food services provider. While the media can “move the needle” with minimal sophistication, content improvement offers additional benefits. Analytics serve as a key driver in this improvement process.

D. Revenue Management - Analytics

Analytics are the backbone of Return on Investment (ROI) analysis and of optimizing the value of dynamic place-based media. The degree to which metrics are used can define the investment worthiness of media. For Digital place-based media technology is the rocket, “content” is the fuel, and analytics is the guidance system.

Dynamic media impact analytics are addressed in separate BUNN paper

A framework for the analytics related to dynamic signage investment, impact and return on investment analysis is provided in a comprehensive whitepaper by Lyle Bunn available at www.LyleBunn.com - RESOURCES titled “Digital Place-based Media ROI Analysis - Defining Value. ROI or Die: Analytics Whitepaper” This separate paper (available for free download (no registration required) outlines objective-setting and measurement techniques, useful to investment planning and content optimization.

The paper describes the analytics that are used to plan and validate investment in digital infrastructure, advertising and operations, and serve to optimize digital place-based media effectiveness. Analytics are much more than “a worthy cause,” indeed analytics are a primary tool of the growing digital messaging age.

Return on Investment (ROI). Tangible measures of value such as increased product sales, acceleration of new products and reduced waste in raw and prepared product, as well as cost savings/reductions due to messaging efficiencies can reflect Return on Investment (ROI).

ROI and ROO both apply to dynamic media use

Return on Objectives (ROO). Less tangible measures such as a patrons’ perception of the attractiveness of the environment or visit experience are typically referred to as providing a Return on Objectives (ROO). Tangible measures are more difficult to achieve, but the business value of the benefit can be as important as ROI measures.

It is common to consider both ROI and ROO benefits provided through the use of dynamic signage. Given the importance of the proportion of ROI or ROO to the food services provider and the evidence of value, efforts to conduct an in-depth impact analysis and value assessment receive cursory attention. Analytic techniques provide high value in optimizing the use of the media.

Dynamic signage modernizes and adds vitality to an environment

Remodeling-Location Upgrade. Dynamic signage offers a modernized and upgraded feel to a food service location. The preponderance of dynamic displays causes patrons (many of whom use flat panel TV at home) to somewhat expect to see their use in locations they visit. The beneficial effects of this may allow the location proprietor to defer or avoid upgrade or refreshment of their facilities. In focusing investment at the order counter, the food services provider is able to focus on their priorities of revenue attainment and customer engagement with their menu and team members.

Dynamic signage modernizes and adds vitality to an environment

“Hawthorn Effect”. In locations where there is high patron re-visit frequency, the dynamic signage can refresh the way that messages and promotions are displayed. The attention afforded patrons by the establishment registers with recurring patrons, who appreciate the messaging vitality and attention to their interests. Messaging and promotion become ineffective as they become “stale”. A

“Hawthorn Effect²¹” can provide benefit.

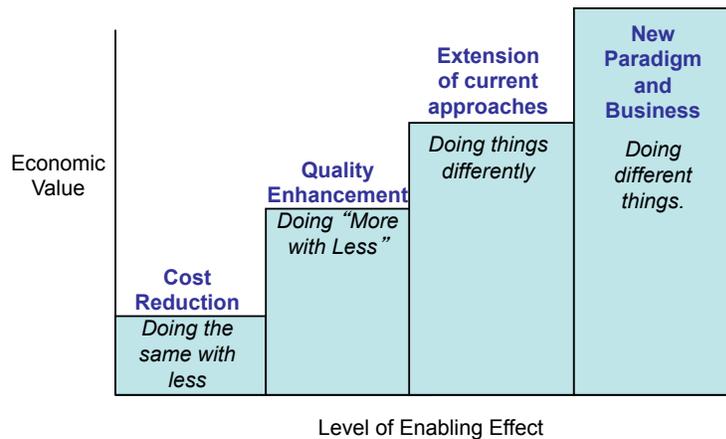
E. OUTLOOK AND CONCLUSION

The old saying “The future isn’t what it used to be” aptly applies to food services, and this is especially true related to on-location promotions and customer engagement. Dynamic signage has proven its ability to increase revenues, reduce costs and improve the ambiance of an environment, and costs have reduced as “best practices” have improved.

The enabling effect of technologies define their high value

The value of information technology-based approaches for end users is in their “enabling effect.” Technologies, such as dynamic signage are best applied when they can reduce costs or allow more to be accomplished for the same overall investment. But technologies can also enable new approaches and new paradigms of service. The application of technologies, such as dynamic signage must offer immediate-term benefits while enabling ever-increasing advantages.

The Enabling Effect of Technologies



BUNN

E1. New Value – New Revenues – Less Business Cost

Operating efficiencies are gained through a structured approach in which communications objectives are defined, followed by a definition of the “content” that will achieve these objectives, followed by the design and deployment of the technology system required to manage and present the content.

²¹ See http://en.wikipedia.org/wiki/Hawthorne_Effect

*Focus on
business goals*

The primary role of the technology infrastructure of a dynamic media display or network is to present the required media needed to achieve communications goals at minimal cost.

The way in which this ecosystem of integrated technologies content management, distribution, play out, presentation and analytics handle “content” is key to the return on investment (ROI), high functionality, ease of use and lowest costs of ownership and ongoing operations that the network operator and users can enjoy. It is common that through the use of the system, the demands of content management and presentation on the technology are increased. The problems of inadequate functionality are negated by carefully planning content approaches toward suitable hardware and software selection and deployment. A similar process is used related to the upgrade of the technology infrastructure to optimize content opportunities and operations.

*Minimize
operating costs
and complexity*

The 4 to 9 year term of use that is expected from most dynamic media installations includes initial capital costs (which can often be financed and amortized), followed by ongoing operating costs.

While technology prices have been declining and performance increasing (i.e. the declining price/performance equation), operating costs, which are human resource intensive have been increasing for design, network installation, hot line support, repair, training and content and playlist administration. These trends are expected to continue.

Operating costs can be minimized and the effectiveness of the media maximized toward the achievement of business goals through the use of functionally capable and “future-proofed” technology infrastructure.

Infrastructure that impedes the use of content, requires reformatting or significant efforts to plan and manage playout deters from system success.

Minimal operating costs and greater content effectiveness are realized when the technology infrastructure, including the critically important Content Management System.

E2. Other Useful Materials

The following additional resources valuable to food service providers (and others) are available at www.LyleBunn.com - RESOURCES. No fee or registration required.

"FAIL TO PLAN - PLAN TO FAIL". As published in the Digital Signage Best Practices" Guide, this articles outlines how to proceed in planning dynamic media networks.

THE "CONTENT" FOR DYNAMIC PLACE-BASED SIGNAGE. March 2011. This comprehensive, 44-page whitepaper provides direction on how to maximize the value of Dynamic Media.

ROI or DIE: THE ANALYTICS FRAMEWORK FOR DIGITAL PLACE-BASED MEDIA. A guide to conducting Return on Investment and impact assessment.

THE POWER OF "OWNED" IN "PAID-OWNED-EARNED" MEDIA MIX. The positioning and role of media infrastructure that is "owned" by the enterprise is described in this paper.

New Menu and Vending Machines Labeling Requirements
<http://www.fda.gov/Food/LabelingNutrition/ucm217762.htm>

Questions and Answers on the New Menu and Vending Machines Nutrition Labeling Requirements
<http://www.fda.gov/Food/LabelingNutrition/ucm248731.htm>

Training and orientation about Dynamic Signage is available through the 4-hour online, self-paced "SPEED II" Digital Signage Training Program available at www.DSEG.org. Over 2500 professionals have benefited from this training, which addresses how to plan, source and operate the medium.

##



Lyle Bunn (Ph.D. Hon.)

Principal and Strategy Architect
BUNN

Lyle Bunn (Ph.D Hon.) is an independent analyst, advisor and educator who has been focused on Dynamic Place-based Media for the past 13 of almost 40 years in his field of information technologies and telecommunications. He was recognized with an Honorary Doctorate for his significant contributions to education and the development of the Dynamic Place-based Media industry (The Digital Signage Expert Group - January 2011). Lyle is one of North America's most highly regarded providers of subject matter expertise to end users, integrators, suppliers, operators and investors of Digital Place-based and Enterprise Media.

His education and advisory services have helped in the development of hundreds of networks in retail, consumer services, hospitality and corporate environments for consumer, patron, staff and student communications.

Lyle has published over 250 articles and whitepapers, and served as principal writer and editor of industry supplements included in USA Today, The Wall Street Journal and The National Post. Popular articles and other whitepapers are available at www.LyleBunn.com - RESOURCES.

Lyle Bunn is broadly recognized as a leading figure in the high growth Dynamic Media industry. Lyle was the only individual named to the Digital Signage Forum's 2005 Digital Signage Top Ten List, among such corporations as Thomson, 3M, Clear Channel, Focus Media and others. He serves on the Digital Signage Expo Advisory Board Industry Consultant's Council, on the Board of Advisors of Customer Engagement Technology World (CETW) and as Academy Faculty of InfoComm International. He also serves on the judging panels of several award programs.

The "SPEED" Digital Signage Training Program, which was launched in late 2008, has been used by several thousand end users, advertising, integrator and supply professionals to accelerate projects and supply capability. In addition to private corporate programs, SPEED is provided at major industry events. His eBook titled the "Digital Signage Planning Guide," was released in its 5th edition in June 2010 and is used around the world.

He presents or moderates at every major North American dynamic media event and was one of the first to carry the messages of Digital Signage, Digital Out-of-home and Place-based media into the broadcasting, consumer electronics, audio-visual industries and Silicon Valley technology sector with presentations at the

National Association of Broadcasters (NAB), Consumer Electronics Show (CES), InfoComm International, International Sign Association (ISA) and others.

Lyle is often referred to as an “industry expert” in articles, presentations, whitepapers and the corporate plans and press releases of companies. In the National Association of Broadcasters (NAB) Executive briefing series he is referenced almost a dozen times including in the initial pages of the book as “one of the better known and better versed champions of digital signage.”

Lyle Bunn provides a range of services to accelerate the sustainable success and mitigate the risks of end users, investors, operators and suppliers of Dynamic Place-based media, such as:

- Defining Maximum Value from Dynamic Signage
- Strategy / Plan Creation and Optimization
- Project Execution
- Education, Orientation and Planning Facilitation
- Content Planning and Optimization
- Project / Network Planning, Review, Refinement and Optimization
- Supplier Identification, Selection, Negotiation and Contracting
- Situation, Opportunity & Market Assessment
- Business / Market Planning & Acceleration
- Alternatives Analysis
- Relationship Architecting (Engaging suppliers and partners)
- Supplier Development

Services are provided on a daily or project basis, and through the hourly "Doctor Is In" telephone consultation program. See <http://lylebunn.com/Services.aspx>

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