

### Overview

The Informatics, Web, & Communications (IWC) group is focused on creating dynamic, interactive web sites based on individual client specifications. We've developed solutions for a diverse client group, including Arnold School of Public Health (ASPH) departments, centers, offices, and projects; South Carolina Department of Health and Environmental Control (SC DHEC); federally funded, multi-site clinical trials; and other external entities. We offer a wide range of technical services, including web site design, custom database development, data capture solutions, multimedia production, custom forms, content management system (CMS) development, and logo design. We work closely with our clients to assess project requirements and design a solution that fits. In addition to our contract services, we also maintain the ASPH web site (<http://sph.sc.edu>) and all ASPH communications (<http://www.sph.sc.edu/communications/>).








### Services

#### Web Design








-  Clean, user-friendly web sites
-  Template development
-  Responsive web design (RWD) for mobile devices
-  Logo and graphic design
-  Multimedia development
-  Social media and Google Analytics integration

#### Custom Web Application Development

*We've developed a number of custom applications based on the needs of each project. Some examples include:*

-  Content Management System (CMS) installation, configuration, and customization
-  User login and management systems
  - Access control to sites based on username and password
  - Profile management and demographic information collection systems
  - Role-based functionality (student, faculty/staff, administrator, etc.)
  - Self-registration and password recovery for users
  - Email notification based on defined actions
-  Grant application submission system
-  Access-controlled document management system
-  Exit interview and graduate tracking system
-  Study participant login system with custom information display
-  Informational and study recruitment sites

#### Data Capture and Form Development

-  Electronic survey design and implementation
-  Mobile data entry
-  Offline data collection with automated upload to and download from central database
-  Role-based access to surveys and responses
-  Data import and export
-  Survey data storage, protection, and backup
-  SMS and email notifications

### **Media Production Services**

- ▣ On-location video shoots and production
- ▣ Video editing and encoding for the web
- ▣ Audio recording, podcast production, and voice overs

### **Hosting**

- ▣ Systems and database administration
- ▣ Regular backup
- ▣ Data security, including HIPAA compliance where necessary
- ▣ Server software and operating system patching and updates
- ▣ SSL data encryption
- ▣ Domain registration for USC internal (.sc.edu) and external (.com/.net/.org) domains

### **Resources**

The IWC servers are hosted within the ASPH server environment and feature virtual Linux-based systems hosted on VMWare vCenter and running the Apache web server. Leveraging the existing ASPH server infrastructure ensures proper physical, environmental, and security controls, including controlled physical access to servers; proper heating, cooling, and power; system redundancy to limit downtime; and regular patching and updates to operating systems and application software.

### **Staff**

IWC has three full-time IT staff with complimentary skill sets working on fee-for-service projects.

#### *Matt McGrievy:*

Matt McGrievy is the Informatics Manager for the Office of Practice and Community Engagement and has fifteen years of systems administration and project management experience. Matt specializes in data management, security, and systems administration. Matt earned his BA in English from Miami University and his Masters of Library and Information Science from the University of Texas. He previously worked managing IT systems in both the Biostatistics department and Center for Bioinformatics at the University of North Carolina. In addition, he served as a systems administrator in the Physics and Astronomy department at Johns Hopkins University. Prior to working at USC, Matt managed the IT infrastructure of the Collaborative Studies Coordinating Center at UNC, which houses a number multi-site clinical trials and studies.

#### *Andrew Hester:*

Andrew Hester is a graduate of the Integrated Information Technology (IIT) program at USC and specializes in dynamic web site design, form development, and database administration. He has a broad technical skillset and develops in a number of programming languages, including Javascript, CSS, PHP, SQL, ASP.Net, DHTML, and content management systems such as Joomla and Liferay.

#### *Grant Jackson:*

Grant Jackson earned his BFA from Jacksonville University and Masters of Fine Arts from Florida State University. He previously worked at the Columbia Museum of Art and SC ETV Radio. Grant specializes in audio and video media production, graphic design, course module development, and social media management. He provides technical expertise in the development of technology components for continuing education courses, including web pages, graphics, interactive assessments and activities, and other media.

## Selected Projects

### Home Care+ Data Management System

*Centers for Medicare and Medicaid Services-funded Health Care Innovation Challenge Grant within the ASPH Office for the Study of Aging*

Web site design, database development, electronic survey development, offline web application, custom form design for participant enrollment and tracking. HIPAA-compliant data collection and management site for the Office for the Study of Aging (OSA). IWC developed a web application for nurses to consent and enroll participants, perform baseline and follow-up assessments, track medications, and maintain a plan of care for participants over time to identify and solve issues before they require a transition in care. Site features include data input validation on all forms, custom reporting, date-based alerts for each patient, and offline access to the system when an Internet connection is not available.

### Global Energy Balance Network Web Site

<http://gebn.org>

*ASPH project funded by Coca-Cola*

Web site and logo design; CMS development with support for video hosting, internationalization, webinar hosting, document management, mailing list sign-up, event registration, and social media integration.

### Healthy Eating and Physical Activity (HEPA) Mobile

<http://hepamobile.com>

*NHLBI/NIH-funded project within the ASPH Exercise Science department*

Mobile web application development, data capture, user management system, automated texting, web design, custom form and database development, feedback on progress for participants, and reporting.

### Multisite Sleep Study Web Site

<http://msleep.org>

*Multisite, NIH-funded clinical trial within the ASPH Exercise Science department*

Web site and logo design; electronic survey development; and custom forms for email inquiry, participant enrollment, and participant tracking. This study enrolls participants individually and requires daily, personalized survey lists to appear based on which study day the participant is currently on. We developed custom forms to display the correct survey list for each participant each day, a tool for researchers to track which day a participant is on, and a form to set the start date and enroll participants in each of the 22 study questionnaires.

### QuitConnect Smoker Registry

<http://quitconnect.org>

*CDC-funded Project within the ASPH Health Promotion, Education, and Behavior department*

Web site and logo design, database development, and electronic survey development. IWC developed a web site and backend database infrastructure to host a national registry of smokers who have previously called tobacco quitlines. The site supports self-enrollment, custom campaign tracking, import from state-level quitline databases, as well a number of methods for coordinated state and regional outreach, such as email and texting of participants.

#### Center for Colon Cancer Research Web Site

<http://cccr.sc.edu>

*Center for Colon Cancer Research site redesign*

Web site design, graphic design, user management, and training for site maintenance. This project was a complete redesign of the center's web site and migration of all existing pages, videos, photos, and external services (donation page, ticket purchase, email list sign-up, etc) into a new CMS.

#### MySPH (My Source for Public Health) Web Site

<http://mysph.org>

*Project within the Office of Practice and Community Engagement (PACE)*

Portal for Arnold School faculty, staff, and students to engage with the local and regional public health community. MySPH currently provides a matching tool (Opportunity Manager) to pair students and job seekers with practitioners and positions; resources for creating and managing a practicum within the Arnold School; an online virtual campus offering public health training and workforce development; and information about local and regional public health news, events, and activities.

#### Center for Environmental NanoScience & Risk Web Site

<http://cenr.sc.edu>, <http://cenr.sc.edu/conference>

*ASPH Smartstate-funded center web site design*

Center web site and template design, CMS development, as well as Nano 2014 conference (International Conference on the Environmental Effects of Nanoparticles and Nanomaterials) web site design and abstract submission system development.

### **Other Projects**

#### Healthy Snacks and Lunchbox Challenge

<http://lunchboxchallenge.com>

*NHLBI/NIH-funded project within the ASPH Exercise Science department*

Mobile web site development, user management system, web design, custom form and database development, leaderboard calculations and reports.

#### Exercise Science Exit Surveys

<https://dms.sph.sc.edu/exsc>

*ASPH Exercise Science department project*

Web site design, user management, database administration, and survey design.

#### Runner Research Web Site

<http://www.runnerresearch.com>

*Project within the ASPH Health Promotion, Education, and Behavior department*

Web site and logo design, survey development.

#### Nigeria Impact Evaluation

<http://nigeriaie.sc.edu>

*World Bank-funded project within the ASPH Health Services, Policy, and Management department*

Web site and template design and CMS development.

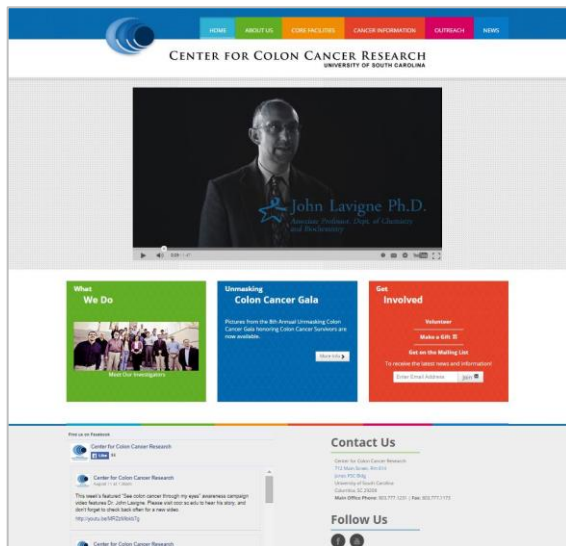
#### Energy Flux/Energy Balance

<http://energyflux.sc.edu>, <http://energybalance.sc.edu>

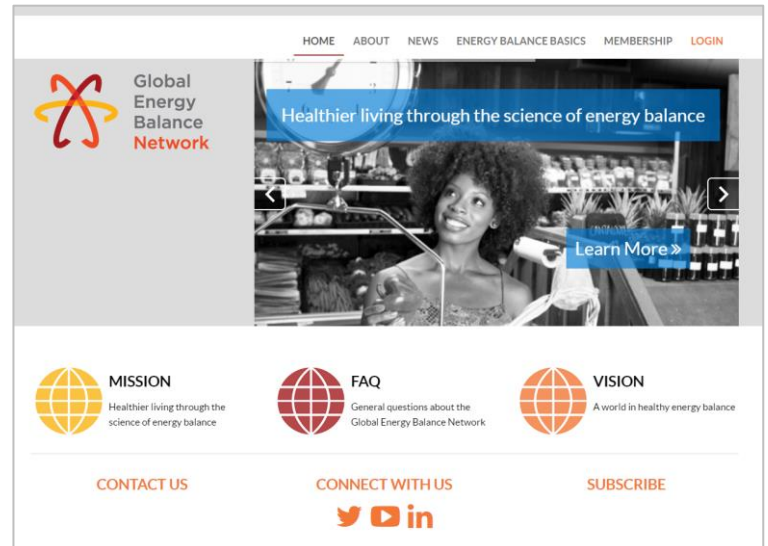
*ASPH Exercise Science project funded by Coca-Cola*

Web site design, email inquiry form, and online video production and hosting.

## Web design



Center for Colon Cancer Research  
<http://cccr.sc.edu>



Global Energy Balance Network  
<http://gebn.org>

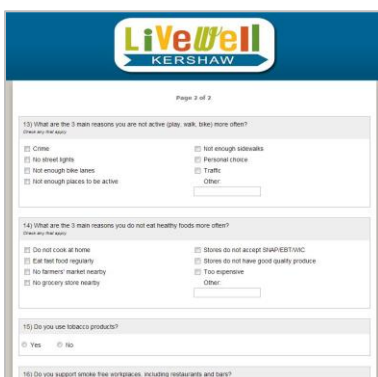


QuitConnect Tobacco Registry  
<http://quitconnect.org>

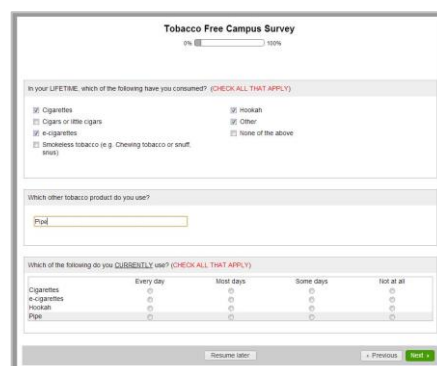


My Source for Public Health  
<http://mysph.sc.edu>

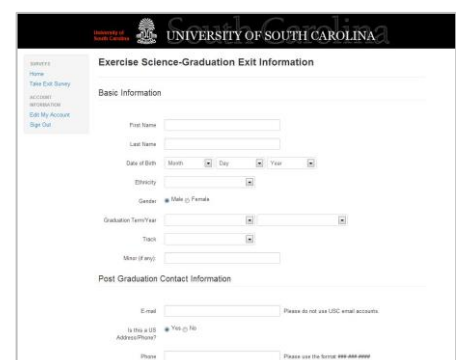
## Electronic Survey Development



LiveWell Kershaw Survey



Tobacco Free Campus Survey



Exercise Science Exit Surveys



## Data Management and Research Tools

Home Care+ patient tracking

Custom participant page based on study day

Mobile data entry

File Management for Multi-site Project

Customized Individual Workforce Assessment Reports and Analysis

Group menu and grocery list builder

## Center and Study Web sites



Center for Environmental Nanoscience & Risk  
<http://cenr.sc.edu>



Energy Flux Study  
<http://energyflux.sc.edu>

Runner Research Study  
<http://runnerresearch.com>