Davies, Mark and Greenhalgh, Chris and Glover, Kevin and Chamberlain, Alan and Crabtree, Andy and Valchovska, Stela and Rodden, Tom (2013) The Dashboard: an online system to help build an online presence and measure analytics for micro-businesses. In: DE 2013: Open Digital, 4-6 Nov 2013, Salford, UK. (Unpublished)

# DEMO – The Dashboard: an online system to help build an online presence and measure analytics for micro-businesses

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## ABSTRACT
Digital marketing plays an important role for businesses trying to attract new customers. For micro-businesses (0-9 workers) or self-run businesses it can be difficult to find the time to market yourself online. Non tech-savvy individuals can be unaware of where to start or how to set up a website. It can be time consuming, costly and difficult to understand the digital requirements. In this paper, we describe an online system - the dashboard, to help micro-businesses learn about building an online presence, using a range of available digital services, and providing analytical data on services that they are using. We discuss how analytic tools can help inform business owners of how useful online marketing tools are for their business and which services attract the most customers and revenue.

## Categories and Subject Descriptors
H.5.m. Information interfaces and presentation (e.g., HCI)

## General Terms
Design, Economics, Human Factors interfaces and presentation (e.g., HCI)

## Keywords
System Design, Participatory Design, Analytics, Analysis, Ethnography, Research 'in the wild', Business Systems

## 1. INTRODUCTION
In Wales, micro-businesses (defined as employing less than 9) play a vital part for the welsh economy. They are accountable for 94.5% of all businesses in Wales and are responsible for over 300,000 jobs in the private sector [1]. However since 2007, growth with micro-businesses in Wales has been falling in relation to the rest of the UK [1].

Google has also identified a lack of online presence for businesses in Wales, with 40% of businesses having no website [2]. What's more is that since 2007, growth with micro-businesses in Wales has been falling in relation to the rest of the UK [1].

The setting of our work is based in rural West Wales, in the county of Ceredigion. We are working with communities, social enterprises and local businesses to support business activities and needs.

## 2. INITIAL ETHNOGRAPHIC FIELDWORK AND ENGAGEMENT
Our initial fieldwork in rural west Wales, Cardigan was with a social enterprise called 4CG. The enterprise encompasses a handful of businesses from an eco-shop, to a crèche, to a local produce market. We also worked with other businesses in the Cardigan community such as a restaurant, which sourced its food locally; within a 25-mile radius. We had a researcher embedded in the community over a period of two to three months, to develop an understanding of the business activities and to collect qualitative feedback on the businesses and their needs. From this previous work [3][4] we found that many micro-businesses didn't have time to look into building an online presence and that most business was done in person, on the ground level. They expressed an interest and saw the perceived benefit of promoting themselves online but lacked the time, money and technical ability to do so. There were a small number of individuals that had a form of online presence for their business, such as a website, Facebook page or Twitter account. These were technically competent individuals that used technology daily and were keen to work with us on developing tools that would target their business challenges.

Key challenges identified in previous work have been – increase footfall and increase marketing, whilst customers are largely interested in discovery.

## 3. The Dashboard
One design concept that we have been developing to support self-marketing of micro-businesses has been the *dashboard*; an online system for building, managing and using analytics to show the user it's impact. From working with local businesses in the rural welsh community, we found that many micro-businesses didn't have websites or know a lot about creating and updating a business presence online, but would be interested in learning, if it was easy to do and didn't require a lot of time.

For the first phase of the dashboard, we wanted to start by introducing to the user a range of digital services that are out there for promoting a business (e.g. Facebook Pages, Trip Advisor, Yell). Together with this, we provide tutorials and guides to learn how to set up accounts and make full use of these services through the dashboard. Once an account has been created to a service, it can then be linked to the user's dashboard. Light icons represent the 'linked' accounts, whilst greyed-out icons represent 'unlinked' accounts. User's can customize their dashboard to suit their preferences. They can add and delete services as they wish.

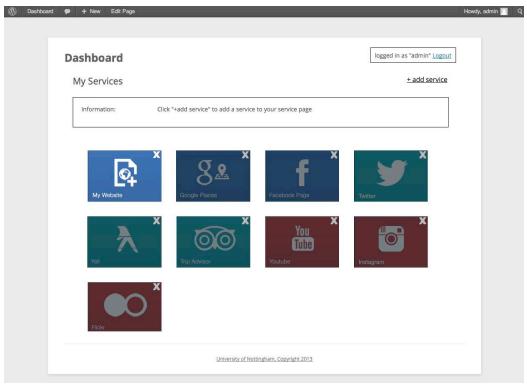


**Figure 1. A user's dashboard with links to service accounts.**

## 3.1 Features of the dashboard

The dashboard has been developed using a stripped down version of Wordpress, which allows us to build simplified interfaces that are very powerful to use. It also allows us to develop our own plug-ins to serve the further needs of a micro-business. Some of the features that the dashboard offers are described below.

### *3.1.1 Discover and use experimental research services and tailored plug-ins*

Previous research toolkits [5], which we have developed internally and can be useful for rural activities and businesses, have been added as a service to the dashboard. We have also developed a plug in for business authenticity, where businesses can be a part of a group or community. This is represented as badges.

### *3.1.2 Help and Tutorials*

For each online service and built in tool we provide tutorials. This helps users to not only discover services and tools that can help their business but to also understand how they help them and how to get started with them.

### *3.1.3 Analytics – showing impact and value to online services*

People that run a business and are online are interested in knowing what customers look at and how customers came to find them - particularly for smaller businesses with less money. They want to know things like; "Is it worth paying £500 a year to advertise on YELL?" "How many people have found me on this service?" How much does it benefit my business?" – for this we use open APIs that offer service usage data and analytics so that businesses can see the impact for each service they market themselves on. What's interesting is the way people use and understand analytics, and how this can inform future business strategies and design (what we can provide to support this).

# 4. FUTURE DEVELOPMENTS

The dashboard is expandable and works as a platform to link digital services that people use or may wish to use. It is currently focused on the business back-end activities. The next phase will be to explore the design of a public-facing interface, which could be a mashup of the user's data from each of the services and tools that are linked to the dashboard. This could look like a webpage with updates, map navigation, videos, images, reviews and everything else, which can be directed a customers. This could potentially be used as a means of a website for businesses, that do not have the time or money to invest in a business website. The dashboard could also be used as a back-end to the administration and updating of this public-facing interface. As well as this, location-based, context-awareness mobile apps could also be explored for the customer/client side. These apps could 'pull' on the geotagged data that the dashboard is pointing to.

# 5. PROJECT RELATED OUTPUTS

As is usual, this demo is based on research that has evolved over the duration of the work. For a fuller understanding of the research and associated outputs, one might also want to read our work on innovation [6], working with communities and data [7] and our latest CSCW paper [8].

# 6. ACKNOWLEDGMENTS

This work is part of the *Scaling the Rural Enterprise* project, supported by the Research Councils UK (RCUK) – grant number EP/J000604/1 and EP/J000604/2.

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