

# CUSTOMIZED INTRANET PORTAL IMPLEMENTATION

Development of an intranet portal based on Office 365, integration with SOTI, SPFx for modern pages and custom widgets components customization

## PROBLEM

## CUSTOMER

The customer is an independent registered housing association from the UK which owns and manages 4K rented homes, and hundreds of leasehold properties, as well as shared ownership properties, commercial units and homeless units. The non-profit organization aims at increasing new homes supply and is recognized as one of the best housing providers in the UK through independent accreditation.

## SOLUTION

The goal of the project was to create an Intranet portal for the company's employees to work with documents and obtain up-to-date information about the company's events and news. Also an important goal was to build functionality that would allow users to gain access to Office 365 applications and other external systems using the Intranet portal. The project was intended to solve the problem of making the system convenient for working with mobile devices for out-of-the-office employees, as well as configure integration of the local Active Directory (AD) with Azure AD and SharePoint Online to use information from AD user profiles.

The solution is used by about 200 users. All users are divided into groups (SharePoint permissions) depending on their business roles. This breakdown helps to regulate access rights for viewing and editing for both libraries and individual documents in these libraries. It also allows administrators to quickly regulate content site rights. In the event that more space is required beyond the Office 365 standard 1TB subscription, it can be purchased additionally.

The solution automates such processes as documentation processing and storage, task management and corporate calendar with notifications.

## FUNCTIONALITY

Transition developed an intranet portal based on Office 365 capabilities provided by the platform and featuring mobile device support as well as developed branding/design features for user-friendly corporate style functionality.

The team also integrated the client's on-premises Active Directory with Office 365 with SSO capabilities from enterprise devices (using [SOTI](#))

Below is a list of portal features developed by Transition's team:

- Navigation development and configuration
- News module implementation
- Taxonomy and document repository setup
- Project and team site templates development
- Storage and display of media content
- Employee directory implementation
- Trending content display
- Corporate calendar
- List of vacancies
- Facebook and Twitter feeds
- Document Storage.

## ARCHITECTURE

The solution is implemented based on the capabilities of Office 365. The interface is built on the basis of standard features with the expansion of CSS and JavaScript tools customized specifically for the customer.

As part of solution development, Office 365 was integrated with on-premises AD to provide single sign-on and user synchronization from the customer's AD to Office 365.

During the analysis phase, the team tested the feasibility of using Delve, Office Groups, Modern Team Sites and Office Graph API. Also, the team developed customer infrastructure mechanisms, approaches and requirements for organizing integration between on-premises AD with Office 365 with support for SSO. The use of standard Office 365 tools for organizing the intranet portal work was also discussed.

The customer used the services of [exponential-e](#) to rent its IT infrastructure, and Transition cooperated with exponential-e's team throughout the project.

To manage corporate mobile devices, the customer used SOTI, an enterprise mobility management solution. Transition was in close contact with SOTI developers who sent our team a device that was set up and tested by Transition's QA specialists.

## SPFX

Transition used SharePoint Framework (SPFx) on this project to implement client side components (Quick Links), extend branding features and incorporate Google search capabilities into the intranet portal. SPFx was also used to implement customization of modern pages and custom widgets components. The use of SPFx simplified developing UI components and allowed them to be natively added to SharePoint.

## INTEGRATION

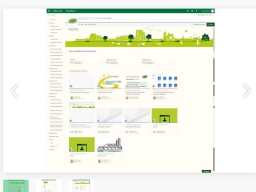
Below is a table of modules and corresponding technological stacks they were developed with:

Module	Technological Stack
Integration layer	Azure AD Connect, AD FS
User synchronization layer	Azure AD Connect, PowerShell scripts (to set up user profile properties)
User Interface Module	Standard Office 365 and CSS capabilities plus a set of widgets using SharePoint Framework, ReactJS and WebPack

“ As with most things we do, the vast majority of people will have no idea of the amount of ambition, effort, talent, complexity and challenge involved in getting to this point—which is the way it should be. To deliver this project in the timescales we've had to work with is an excellent achievement, particularly given other competing priorities. Thanks to all of you for your hard work, dedication and professionalism—you've all played a massive part in shaping the future of our company and of that you should be proud.

## NDA

Customer's Head of IT



## PROCESS

The team working on a fixed priced model consisted of a designer, architect, business analyst, project manager, QA engineer, QA manager and 3 developers, and offered full-cycle development services from analysis and requirements gathering to testing, maintenance and support. Weekly status calls were held and constant communication was maintained with additional on-demand calls to resolve urgent issues.

One of the challenges on the project was using SharePoint Modern Pages. At the time, Office 365 did not provide approaches for customizing this page type (use of non-standard styles and layouts), old web parts were not supported and new ones were not satisfactory.

The project was characterized by close collaboration with Microsoft's support team. Transition created a ticket to Office 365 support with a detailed Modern Pages problem description. During calls from Microsoft's support center specialists, more details and issues were uncovered. Microsoft admitted the reported issue was a problem and kept updating Transition's developers on issue resolution activities. As a result of a few weeks of constant communication, the defect was successfully fixed.

Other problems regarded using the SOTI browser on mobile devices. Those issues were on the SOTI side but thanks to efficient communication and collaboration with SOTI's team they were also resolved successfully.

155 hours of non-functional, smoke, regression and design verification testing was performed, uncovering 85 defects that were successfully fixed.