In a 2013 Productivity Commission Research Paper, it highlighted that New Zealanders work about **15% longer than the OECD average to produce about 20% less output per person**. Over the last 40 years, New Zealand’s labour productivity has been falling behind other OECD economies. The report concludes by strongly recommending New Zealand companies **to have a clear focus on improving productivity**.

With an increase in productivity, company profits will increase, and therefore allow them to better support and invest in New Zealand.

The aim of Timekeeper is to **target productivity in the workplace with a technological solution**. In particular we will be targeting **small to medium sized New Zealand companies whose employees do most of their day to day work on computers**. Although computers are a powerful and productive business tool, they can also be distracting to employees. SLIDE CHANGE

There are many distractions available to employees working on computers. These include videos, social media, memes, and desktop entertainment applications. We understand that **having some distraction is important for employees**, however too much will be detrimental to productivity and the company. SLIDE CHANGE

Our solution will include a **system tray application to be installed on employee workstations**. This application will be able to determine the title of the current active window over time, and continuously upload that data to the cloud. This allows a supervisor to **track trends in worker productivity**, such as the amount of time a worker is on productive or unproductive applications, patterns of productive and unproductive application usages, and the times of day that users are most or least productive.

The supervisor sees the data, trends, and statistics via a **Xamarin cross platform app**. On the app they can **customise the productivity classification** of applications and websites to suit their own company’s work ethic. Additionally supervisors **can choose** whether or not to assign names to each workstation’s user ID to **protect individuals’ privacy**. The trends and patterns viewable on the app will **help a supervisor to increase productivity in the workplace**, such as blocking problem applications or websites, scheduling breaks at unproductive times of the day, or seeing which productivity trends produce the best outcomes. SLIDE CHANGE

Based on market research, our main competitor will be the Canadian based **employee monitoring software** WorkTime. We believe that Timekeeper will be significantly **more desirable and useful** than WorkTime. Along with a much **more modern UI** and a **larger range of customisability** for individual businesses, Timekeeper will also be **less invasive**, collecting no sensitive or personal information. Based on feedback from New Zealand businesses, Timekeeper will be more **outcome focussed**, providing more **company-wide trends and statistics**, allowing supervisors to **plan** **improvements to productivity** rather than only showing real time and past statistics. **SLIDE/PERSON CHANGE**

Timekeeper will be provided to commercial customers as **a recurring subscription based, software as a service** solution. If required, we would also be able to **provide installation** of the software on employee workstations for a small additional cost. We calculate that **providing Timekeeper as a service will be relatively cheap**, with the only running costs being server maintenance and employee wages.

Ideally we would **partner with companies who provide software, hardware, or web services** to technology companies. Two such examples would be Microsoft, or Dell. Through a partnership with a company such as Dell, we **could provide customers with workstations preinstalled with Timekeeper** software. Similarly, through a partnership with a company such as Microsoft, we could **provide customers with some sort of a software package deal**. SLIDE CHANGE

The **employee side application** will be installed as a **windows forms application** on employee **workstations**. The application will **not** have a main application window, and will exist solely in the **system tray of the desktop**. The windows forms application **uploads the title of the current active window to a database** along with a workstation ID number and the time and date. Currently our prototype system uses a **Microsoft Azure MySQL database**, but in a business application we would use our own servers. In its prototype phase, the employee side application **has only been developed for windows**, however we are also considering developing for Mac or possibly android devices – as a **large number of distractions also come from mobile devices.**

Both the employee side application and the supervisor side app have been developed using C# and XAML on Microsoft Visual Studio. SLIDE CHANGE

The **supervisor side app** has been created for **cross platform usage using Xamarin**. It will be available for windows, windows phone, android, and iOS. This will allow a supervisor to have **greater flexibility with the ability to track and view statistics on the go**, as well as at a desktop. The Xamarin app gets data from the database via a **custom rest API.**

The supervisor will be able to **view, customise, and sort** a list of users, as well as accompanying statistics for those workstations. Additionally, the supervisor will be able **to view, customise, and sort** a list of applications and websites, with accompanying statistics. Timekeeper will also **display company-wide graphs** showing hourly productivity trends for the day, as well as patterns over weeks, months, and years. Based on these statistics, Timekeeper will also **offer suggestions and improvements** that a supervisor could make to **improve productivity in the workplace**.

We have also prepared a live demonstration of the supervisor side Xamarin app. **LIVE DEMO**