

**Group 30**  
**FDM Trainer+**

**ECS506U Software Engineering**  
**Group Project**

**Problem/Domain Analysis Report**

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# **1. Introduction**

## **Domain Outline**

Wasted time costs UK businesses £80bn annually, that's an equivalent to 7% of its GDP, clearly indicating organizations underestimate the importance of adequate time management and allocation of resources (Chapman, 2021). FDM Trainer+ is a training scheduling system which runs as a desktop application. It allows for an ever growing selection of courses to be scheduled and assigned to a trainer with a class of trainees. Key features of the Trainer+ application include assisted scheduling which prevents major scheduling errors from occurring and helpful alerts which notify trainers and trainees of their upcoming scheduled courses. By conducting this domain analysis report, the information acquired, captured, and established throughout the development of Trainer+ will be properly examined, resulting in faster and improved development as well as a greater sense of anticipation for the application itself.

## **Problem Overview**

FDM is a multinational organisation spanning across the globe with 12+ training academies worldwide operating all year round. Naturally, taking into account the sheer size of its training operations, coming up with effective solutions for the scheduling and managing of their training is no easy feat. Combined with the satisfaction of FDMs services from its clients, trainers and trainees being heavily dependent on a successful training year. More care and attention is required when creating a reliable, functional and convenient training scheduling application to combat the potentially devastating consequences of poor scheduling such as inefficient workflows and chaotic operations (Consequence of Poor Employee Scheduling, 2011).

## **Overcoming the Challenges of Year Round Training**

With a reputation for hiring in volume each year, the pressure is on to disperse and progress these individuals through the training programme as efficiently as possible without compromising on the quality of the training. Overlap or unattended delays involving the scheduling of training can quickly become a major problem prohibiting the progression of trainees and the completion of courses in a timely fashion (10 reasons why time management is important, 2020). The need for a system to anticipate, deal with and even avoid scheduling errors is one that Trainer+ can cater to. Due to smart algorithms running in the background, constraints regarding the do's and don'ts of scheduling are constantly at work, providing the academy scheduling staff a helping hand at seamlessly coordinating course after course all year long.

## Overcoming the Challenges of High-Volume Hiring

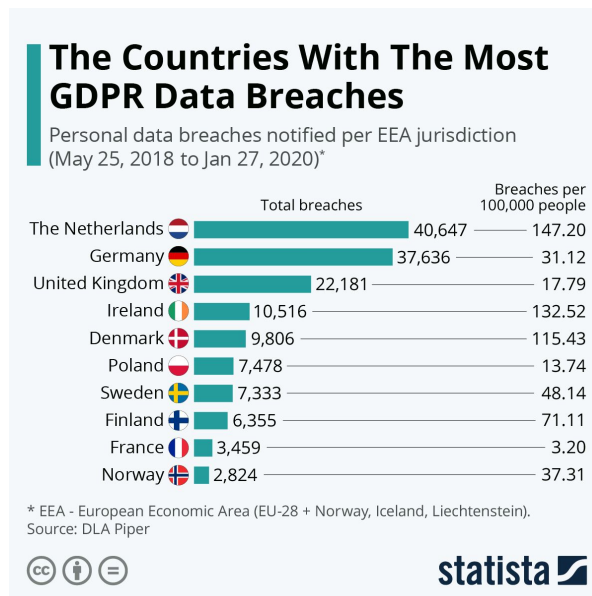


Figure 1, GDPR data breaches occur more than we may think (McCarthy, 2020).

Onboarding over 2000 individuals every year bears alongside its burdensome responsibilities in today's day and age. Collecting and managing information about a large number of individuals isn't as simple as collecting, storing and retrieving anymore. Strict rules regarding proper collection and handling of an individual's personal information by an organisation have been set out in legislation such as the General Data Protection Regulation of 2018 (Wolford, 2021). Hence, organizations could fall victim to scandal and troublesome repercussions if they do not conduct themselves accordingly within the law (Don't fall foul of the GDPR, 2019). Our application seeks to alleviate the burdens of not only gathering and organising this large amount of data but also simultaneously having to comply with the law. Trainer+ keeps organised records of individuals registered onto the application which makes updating and retrieving an individual's data effortless. In addition, Trainer+ has implemented inside of it the data protection principles that allow the application to naturally act in accordance to current legislation. These features were added for the peace of mind of both FDM and the Academy Scheduling Staff as it takes the pressures of compliance away.

## Overcoming the Challenges of Coordinating Courses

Bringing together the individual components of courses, trainers and trainees into a harmonious relationship can prove challenging since so many different requests and needs have to be catered for. Trainers have specific skill sets which make them suitable to teach specific modules in different courses, they also need to be scheduled according to their availability. A great deal of consideration has to go into allocating the correctly skilled trainer to a course module during their availability. Means to update a trainer's skill set and availability are also in order to maintain the longevity of the training schedule. The degree to which the scheduling is fulfilled is the degree to which FDM will reap its many benefits in forms of client and customer

satisfaction as well as increased earnings (Negi and Mohan, 2021). Trainer+ facilitates this by keeping up to date records of all trainers and trainees as well as making use of a central calendar timetable which manages the year's schedule. Trainer records contain the trainers availability and skill set so that they can be conveniently allocated to a course module that suits them entirely. The calendar is also synced to the trainers and trainees account so that they can be alerted of upcoming scheduled modules. All of which is of massive aid to the academy scheduling staff.

### **In Summary**

Trainer+ is the ultimate tool for the successful scheduling of training. Its functionality allows for the seamless continuation of training to be scheduled while smart algorithms do all the heavy lifting in the background, taking pressure off the academy scheduling staff worried about law compliance and error prone timetables. All whilst alerting trainers and trainees on upcoming scheduled modules to stay one step ahead.

## **2. Customers and users**

### **Outline**

In this section we take a look at the different personas that will use Trainer+. Doing so allows us to clearly understand what each users' needs, experiences, behaviours and goals are when using the application (Friis Dam and Yu Siang, 2021).

### **Academy Scheduling Staff**

Academy scheduling staff are categories into two different user roles; course staff and assign staff. The academy scheduling staff are given access to the central timetable where they can create courses with available and qualified trainers alongside a class of trainees. They set up alerts for each module's corresponding trainer and trainees as well as sync their calendars accordingly. Organization and time management sit high in the list of priorities for academy scheduling staff (Scheduling Coordinator Job Description, 2020), they realise that the central timetable is the lifeblood of training at FDM and should be dealt with cautiously and precisely.

What separates the academy scheduling staff from other users is that they use the application mainly for purposes of entering information such as new courses and trainer/trainee allocation. Their goal when using Trainer+ is to update the central timetable, whether that's to remove a scheduled course or to change trainers on a specific module of a course as well as setting up the alerts for all involved individuals in an upcoming scheduled module.

Academy scheduling staff have:

- Relevant experience in a similar role
- Thorough understanding of Trainer+
- Excellent knowledge in correct coordination and scheduling practices
- Advanced organization and time management skills

### **Trainer**

The trainer is given access to their very own account where they can view and update personal information including availability and skill set. In addition, they can view their personal schedule and alerts for upcoming scheduled modules to teach. Trainers have a fundamental responsibility to mentor their trainees and share the wealth of knowledge they have in their specialised field (Teacher Job Description, 2020). They understand the success of their trainees is heavily reliant upon the extent to which this knowledge is conveyed. Trainer+ feeds this dependency by alerting trainers of upcoming modules they are in charge of so they won't miss it and compromise the learning of their trainees.

Trainers have a similar user experience when using the application with trainees as both use the Trainer+ to view their schedule and any alerts they have. The difference between the two users however lies in the details of what they can view. For example, a trainer can view the upcoming modules they will be teaching as well as the details of trainees assigned to a specific module. On the other hand, a trainee can view the course they are enrolled on with their trainers details. The trainer uses the application to stay organized and aware of what is up and coming in their schedule.

Trainers have:

- Substantial knowledge and experience in their specialised field
- Excellent interpersonal and leadership skills
- Effective application of training methods and procedures
- Advanced communication and presentation skills

### **Trainee**

Similar to the trainer, the trainee is given access to their very own account where they can view and update personal information. They can also view their personal schedule and alerts for upcoming scheduled modules. All trainees share a mutual interest in becoming a trained IT Consultant. Filled with passion and enthusiasm about technology and its useful applications, they are ready to dive into the wealth of knowledge shared by their expert trainer (Christilaw, 2021). With Trainer+, staying up to date on the next scheduled module is easier than ever with alerts.

As mentioned above, trainees and trainers have a similar user experience due to related goals when using the Trainer+ application. Trainees can view the course modules they are enrolled onto with relevant trainer details whereas trainers view the specific modules they will be teaching and details of trainees in their class. In the perspective of a trainee persona, the application's purpose is to stay organized and aware of what upcoming modules they have scheduled.

Trainees have:

- A graduate, returner to work or ex-forces background
- Passion to become an IT Consultant
- Ability to think and work independently
- Ability act responsibly and have accountability

### **System Administrator**

A system administrator is given access to all aspects of Trainer+ to oversee the entire operation of the application. They must ensure Trainer+ is updated and running as it should, contacting the necessary resources in order to fix problems as they arise. For example, recovery of lost or forgotten login details must be quickly dealt with by sending the user the correct form to fill out. Adding and removing users and user permissions is also a part of the role. For instance, removing a trainer that

no longer works for the organisation or a trainee who no longer wants to continue with their course. Furthermore, they are tasked with handling queries and feedback from users, taking the appropriate actions to resolve questions and reply promptly.

System administrators must have an aptitude when it comes to customer service. They should be able to deal with issues as they come whilst remaining organized amidst all the different tasks they have to do (System Administrator Job Description, 2020). It is also part of their responsibility to make a point of increasing system efficiency by optimising memory allocation when amending records of individuals. The user experience of a system administrator is truly unlike any other, holding an 'all access' pass that unlocks all the functionality of Trainer+ due to the nature of what they are tasked with.

System administrators have:

- Appropriate experience in Information Systems or Information Technology
- Excellent understanding of Trainer+
- Ability to think under pressure
- Good customer service and problem solving skills

### **A Note Regarding Stakeholders**

The personas listed above help to identify with and understand the users the application is designed for (Friis Dam and Yu Siang, 2021). Stakeholders such as application and database developers who are involved in developing the application are not mentioned as personas since they will not be users of the system, however we recognize their significance towards achieving an application such as Trainer+.



### **3. The environment**

#### **Reasons for desktop development**

##### **Connectivity (Advantage)**

Desktop applications are independent from the internet as they do not require being connected all the time compared to web applications (Momook, 2018). FDM will be able to provide a service for all users who cannot access the internet at a given moment. Allowing the user to view their latest schedule, which means there will be no interruptions (Gaille, 2019). This shows how web applications limit users from connecting to their services compared to desktop applications.

##### **Performance & Effectiveness (Advantage)**

FDM Trainer+ will have tasks that are quite complex to carry out for any users that possess small screen devices. An example of a tedious task would be to allocate many different trainers to the appropriate course (Section 4). According to a study conducted by Moreno et al (2015), users required an extra “17% more time in average to perform a task with the tablet than with the computer”. From a performance perspective, FDM employees will be provided a slower service if they use tablets or mobile devices due to simple tasks taking longer than expected. The consequences of not developing the application on desktop would be the loss of current and future customers as they would be frustrated that the service FDM is providing is slow (ThinkSecureNet, 2018). Furthermore, Moreno et al (2015) found out that using an iPad which is considered as a small screen device can “confuse the user” when using interface elements such as input buttons for records, drop down calendars or image input systems. In conclusion, “people simply do not want to view and analyse data on a small screen” (Preimesberger, 2017).

##### **Portability (Disadvantage)**

Smartphones are highly portable due to them being lightweight compared to desktops, this means they are easy to carry and are accessible (Computerhope.com, 2020). Desktops unfortunately are heavy and are designed to be in one location. For example, a home or an office. A solution to this would be to use a laptop as they are similar to a desktop but portable (RS Web Solutions, 2019).

##### **Updates (Disadvantage)**

Web apps do not force the user to download any recent updates as is done by IT departments. Desktop applications require users to make an update in order to have the latest features (Gaille, 2019). A solution would be to send an email to the trainee requesting them to install the latest version.

## Windows 10 Operating System

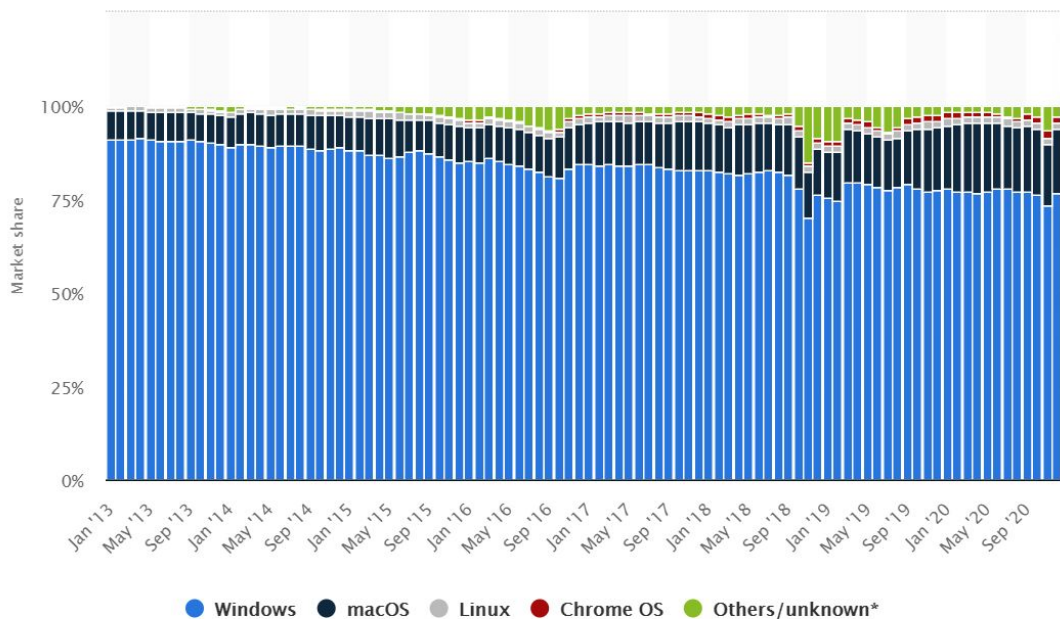


Figure 2

### Accessibility

According to Statista, Windows 10 is the “dominating desktop operating system (OS) worldwide”. As of December 2020, Windows 10 shares 76.56% of the global market for desktop operating systems. Its second rival, MacOS, shares 17.1% which is a huge difference by about 59.46% (Figure 2). FDM Trainer+ will therefore be able to reach out to a wider audience of all ages which means people will be able to use the application. FDM will be able to bring in new potential recruits as Trainer+ will be on the most used operating system (Windows 10: 76.56%) as it is widely accessible (Liu, 2021).

### Future Proof

Microsoft development executive Jerry Nixon stated “Windows 10 will be the last version of Windows” (Kelly, 2016). FDM Trainer+ will no longer need to worry about transitioning from one operating system to another. This means the core of the application i.e., the code written, will not have to be changed dramatically. This will save time & money for FDM as they will not need to make a new application that is compatible with a new operating system.

## **Java, MySQL & JavaFX**

### **Compatibility (Language)**

Java DK8 is compatible with the 32 and 64-bit system architecture for Windows, Linux & OS X (32-bit is not included) (Oracle.com, n.d.). FDM Trainer+ will be able to run on the top 3 global operating systems as of December 2020 (Liu, 2021) increasing accessibility to desktop users. Programming in Java means that if FDM wants to branch out to Linux or OS X, they can without extra development costs. This is because once Trainer+ has been developed, Linux and OS X can translate Java and so it will also run on their operating systems.

### **Economical language to maintain**

After the release of any project, maintenance plays an important role in keeping up to date with the latest features in the market, meeting the user's needs based on feedback and fixing any errors. Within the software industry, maintenance is about 15 to 20 percent of the original development investment (Chomko, 2012). Java programs are cheap and economical to maintain as they rely heavily on the hardware for them to run (TechVidvan, 2021). This allows FDM to reduce the cost of maintenance.

### **MySQL (Database)**

MySQL allows Trainer+ to store data into tables which may be required when creating a query or managing records. Learning how to use MySQL is not difficult and only requires a basic understanding to create a database. All sensitive data is protected by encryption as MySQL consists of a security layer which is fundamentally important as General Data Protection Regulation (GDPR) laws impact how a company stores data of its users. The database server is able to communicate with the application due to its client/server architecture therefore, data will always be up to date. No fees need to be paid in order to acquire the database software. MySQL has been benchmarked and it is considered to be very fast which in return will improve system performance and the overall usability of the application (javatpoint, n.d.).

### **JavaFX (GUI)**

JavaFX supports the Model View Controller (MVC) design pattern (EDUCBA, 2021) which is important as this allows you to separate your work from the logic of the application and the design of the application. If the logic and design were to be stored in the same file, it would become less manageable and harder to read and identify any mistakes. JavaFX is a "fully integrated feature of Java" (Docs.oracle.com, n.d.). Therefore, no separate installation is required, and it is for free. Support from Oracle is available for free which means any bugs can be resolved by the primary software provider (Müller, 2013).

## 4. Tasks and procedures currently performed

### Introduction

Trainer+ facilitates the needs of all personas mentioned in Section 2, namely, academy scheduling staff, trainers, trainees and system administrator. In addition, stakeholders such as application and database developers can access and modify the application using the environments described in Section 3. All users are given accounts which they can access via their username and password. Each user, depending on their user role, will be greeted with a different view of the application and have their permissions set according to the user's needs. Based on our company background research and the information given from FDM, we've identified the tasks currently performed and the most essential ones, and these will be included in our application.

### All users

- **Register** – All users can register with Trainer+ providing their unique FDM ID, full name, email address and phone number. They will also be asked to create a username, password and password hint. Permissions on each account will be set during registration according to the unique FDM ID provided, for example, trainers set to trainer accounts and trainees set to trainee accounts. Each different account has access to certain permissions that are allowed for that user.
- **Login/Logout** – All users have to log into Trainer+ when launching the application. They have to enter their username and password to do so. Passwords are stored in a secure database and are hashed when created. In the case that a user selects "forgot password" they will receive an email containing their password hint. When logged in, a logout button is available to the top left of the application which will take the user back to the login screen.
- **View calendar** - All users are able to view a version of the central calendar which corresponds to their account permissions.

### Academy scheduling staff

#### Course staff

- **Create a new training course** – They can create a new training course with different modules and descriptions. Therefore if any new courses need to be taught, a new training course can be created.
- **Deactivate old training courses** – They can deem a training course as inactive if it is no longer needed (it is then the admins job to deal with inactive courses). This task is carried out by using the search function then changing the state of the training course.

- **Search for training courses** – This enables you to search and view for a training course by either its name or ID. Once you have selected the training course from your search results, you are able to read it's description and view the contents of it.
- **Update a training course** – You can change or update the contents of a training course by using the search function above. This allows you to change the course content, description and state.

## Assign Staff

- **Search trainer/trainee calendar** – This user can search for a trainer or trainee by their name or unique ID to be able to view their schedule and see when they are available. The purpose of this is to know when to add trainers to teach as well as trainees to attend.
- **Assign training session**– Allows you to add a training course to a trainer or trainee schedule. This will also automatically alert them and sync their calendar. This requires you to use the search function depending on who you're adding to a course.
- **Cancel training session** – Enables the user to cancel training sessions according to a trainer or trainees' availability. This is in case a trainer becomes unavailable such as if they get ill. In which case the course has to be given to another trainer. Another case is where a trainee no longer needs to complete a specific course.

## Trainee

- **View training courses** – This user can view all their scheduled training courses and see which ones have been completed, which ones that are currently in progress and which ones are still to come. In any case where a module has been completed, the user can see the completion date as well as a pass or fail mark to avoid being assigned to the same module again.
- **View alerts** – The trainee can view notifications from the app indicating they have an upcoming course that is being taught by a trainer. This is so they can attend and complete the course on time without forgetting.
- **Edit personal details** – This function is so that this user can change their email address and contact number if they need to. They can also change their password if they want to.
- **View your profile** – This allows you to see your personal details as well as how many training modules you have completed. In addition, you can see a progress bar that tells you how far along you are in your whole training journey.

## Trainer

- **Edit specialised fields** – Trainer accounts will have a tab under their profiles indicating what fields they are specialised in, which they can update.
- **View trainees** – The trainers are able to view the recruits that are enrolled on any of their courses and see their names.
- **View alerts** - The trainer can also view notifications from the app indicating they have an upcoming course to teach.

## Administrator

- **View trainer/trainee profile** – The admin can search for any trainee/trainer by name or ID number and see their modules completed, in addition to what date they were started and completed. This enables them to check when all a particular trainee's courses have been completed and therefore know when they have finished their training journey.
- **Search user** – This can be used to find any type of user in the system.
- **Remove user** – The function here is used to remove a user from the system and can only be done by the admin. It is done when a trainee is finished with their training, a user no longer needs access to the system since they've got a different role in the company or if a user is no longer part of the FDM company.
- **Remove training course** – The admin can remove a training course from the system when it has been deactivated by a member of the academy scheduling team. Therefore, when an admin sees that a training course is inactive then they can permanently remove it from the application.
- **Add/remove permissions** - This allows the amending of user permissions if a case comes up where a user account needs access to permissions only available on other accounts.

## Application Developer

This developer is able to fix errors as they arise and login with a temporary account to test the system, making sure it is running without complications. If any old features require updating or a new feature needs to be implemented, the application developer can do so. They can also change the GUI layout and design if necessary.

## **5. Competing software**

### **Market Research**

#### **Motivation**

We found it necessary to employ a short survey for the purposes of gaining market insight. This survey was designed to gauge what factors and features the target audience deemed the most necessary. The findings of this survey are meant to solidify the justification of our selected features, such as the desktop application and the use of Windows. The target audience was projected to be the same portfolio as FDM's clientele. These included fresh university graduates, veterans and returners.

#### **Results**

The survey allowed us to unequivocally assume that an audience similar to FDM would prefer to use a desktop platform that employed Windows as its operating system. Furthermore, this survey also allowed us to get a sense of their preferences in terms of the application features.

#### **Introduction**

The software applications discussed in this section all fulfill a certain purpose and do not necessarily belong to the same industry sectors. This was to identify the common features that allowed an application, regardless of its domain, to garner positive feedback. Furthermore, the findings of the survey identified and established software traits that an audience similar to FDM's generally prefer in platforms like Trainer+. Hence, the dissections of the competing products below were tailored to represent the extent to which the said features/traits had an influence on their respective users' feedback.

### **Example Software Applications**

#### **Arlo**

"Arlo is a cloud-based training management system for managing, marketing and delivering physical and online training. It provides streamlined event scheduling, online registrations, invoicing and receipts, runs marketing activities, and manages client records and relationships. The service can be rapidly deployed and seamlessly integrated within your website and connected with your other business applications." (g2.com, 2021)

## Justification for selection

Arlo serves the exact technical niche that Trainer+ aims to provide. As a training management software, it excels in the processes of scheduling, selecting and managing training and it has had more than ten years of evolution and is now deployed globally across over 70 countries with a high satisfaction rate of 99%.

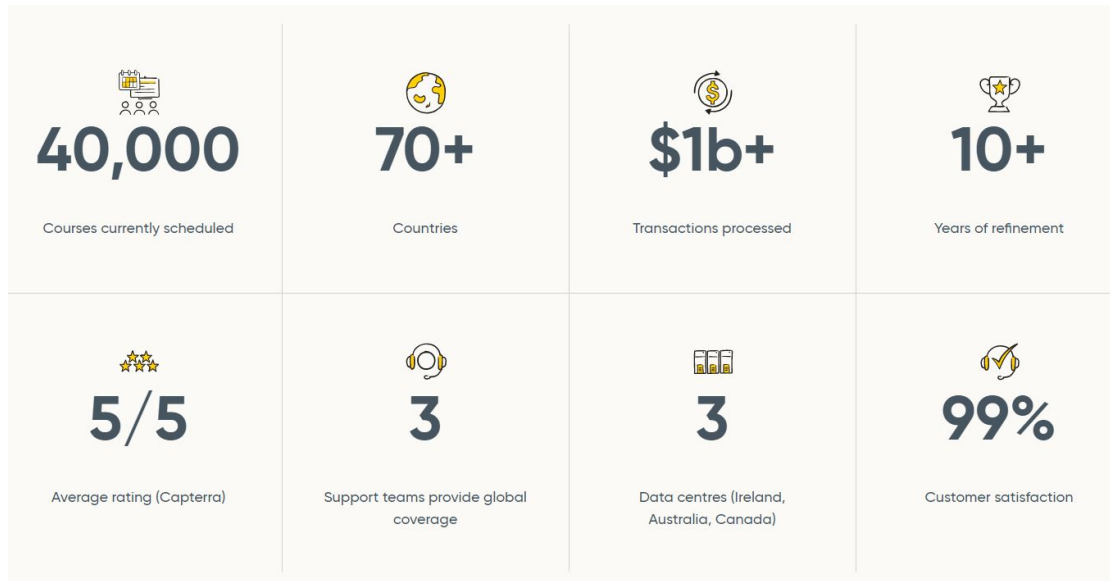


Figure 3, #1 for Training for Training Management Software (Arlo, 2021)

## Features

These are the event booking and management features that OASIS offers:

- Attendee Management
- Confirmation/Reminders
- Discount/Coupon Management
- Event Calendar
- Marketing Management
- Online Payments
- Online Registration
- Social Media Promotion

(Capterra, 2021)

## Advantages

- Arlo allows syncing calendar details across various platforms such as iCal. This proves to be convenient for users who can access information through their preferred medium (g2.com, 2021).
- According to a diverse range of users, Arlo is very simple to navigate and operate. This user friendly UI allows users to actually use the application for its intended purpose; simplify tedious scheduling processes (g2.com, 2021).



- Arlo has a very responsive customer support service. The AI chatbot allows queries to be addressed quicker than FAQs. Furthermore, representatives from the company are quick to reach out via email based on the users' interaction with the chatbot.

## **Disadvantages**

- For many of the features that Arlo offers, third-party extensions and plugins are common. User reviews suggest that this is typically a tedious process. Setting up frameworks for a particular feature that a user needs to use urgently is frustrating. (Capterra, 2021)
- In the case of an event cancellation, Arlo does not allow the event manager to inform the event's stakeholders about the actual reasons behind said cancellation. Managers have to send specific details because of the lack of information in Arlo's generic emails. (Capterra, 2021)

## **Oasis**

OASIS is a web-based course lottery, scheduling, and administration system designed for the unique needs of health science and professional schools. OASIS gives administrators, students, and faculty 24/7 access to student, course, and schedule information. Students become actively involved via the web in building and maintaining their lottery selections and schedules, completing course and faculty evaluations, and verifying their records and activities. Program and department administrators are able to configure and manage courses, distribute notices, and verify across departments if prerequisites and other requirements have been met. OASIS directors manage a scheduling process that becomes more efficient than ever before. (OASIS | Medical School Scheduling | Web Application Tools | Schilling Consulting, 2021)

## **Justification for selection**

The calendar-centric features listed below highlight the application's emphasis on scheduling capabilities. This aligns with the particular technical niche that Trainer+ aims to fulfill. Furthermore, the user roles and relevant procedures for Oasis have a significant overlap with those discussed for Trainer+ in sections 2 and 3.

## **Calendar-Centric Features**

- Create a fully searchable electronic calendar, giving students easy access to day-to-day activities common in preclinical courses.
- Assign levels of access and editing rights.
- Create templates for events sharing common elements.
- Form student groups to ease maintenance of event rosters.
- Add school-specific metadata to each event, including objectives, keywords, instructional methods, assessment methods, horizontal themes and

resources, to inform students of the topics which will be covered.

- Attach files for easy access to course materials, including ability to search file contents.
- Export the OASIS calendar to a desktop or to portable devices such as Apple's iCal or Outlook and to online calendars such as the Google or Yahoo calendar.
- Integrate the calendar with compatible electronic room scheduling packages. (OASIS | Medical School Scheduling | Web Application Tools | Schilling Consulting, 2021)

## **User Roles**

- **Course administrators**
  - Configure multiple course locations and complex availability information.
  - Define and enforce academic requirements and course prerequisites.
  - View detailed, up-to-the-minute course roster and add/drop reports.
- **Schools services**
  - The ability to create online checklists.
  - Send notices.
  - Conduct surveys.
- **Directors and Administrators**
  - Upload documents, such as transcripts, to student history profiles.
  - Maintain and access student records anytime during admittance, enrolment, or post-graduate work.
  - Use student profiles to facilitate creation of the dean's letter.
  - Automate standard notifications.
  - Provide online orientation materials to students, reducing the risk of notices being lost in the mail or delivered to an incorrect address.
  - Develop online checklists, facilitating sign offs from multiple offices or departments.

(OASIS | Medical School Scheduling | Web Application Tools | Schilling Consulting, 2021)

## **Advantages**

- Varying the degrees of access to the calendar scheduling allows for
- enforced security and minimizes chances of administrative redundancy.
- The ability to export details to other applications increases synchronicity and convenience.
- Schedules are updated in real time. This eliminates chances of students
- viewing outdated information.

## **Disadvantages**

- Glitches are encountered regularly. Considering the time-sensitive needs of course lotteries and a global calendar, this can/ or does cause loss of data and is a stressful inconvenience for the students. (g2.com, 2021)
- The applications' interface is outdated and is not aesthetically appealing.. For the product, this reduces credibility and hence, attraction. (g2.com, 2021)

## **Degreed**

Degreed connects learning and career growth to business opportunities through one single, fluid skill-development experience, so your organisation and your people are always ready to clear the next big obstacle (The Upskilling Platform | Degreed, 2021).

## **Justification for Selection**

Albeit not exclusive to a particular company, this platform serves to fulfil training needs for individuals and organizations, regardless of the scale. This is why the features offered by Degreed, particularly the scheduling-centric capabilities, can be used as a possible benchmark. Furthermore, the scale of the companies, in terms of operations and locational diversity, that employ Degreed, such as KPMG and CitiGroup, is similar to FDM's. (Internal Survey, 2021)

## **Advantages**

- The use of an on-demand training platform offers a huge variety of skills and courses to be taught by an extensive list of trainers.
- A web-based application provides the convenience of remoteless use.
- It is logistically simpler for the organization to reimburse employees for their purchases on platforms like Degreed instead of deploying a personalized and exclusive platform.

## **Disadvantages**

- An on-demand training platform allows users to stream pre-recorded content. This goes against the class-scheduling vision that FDM has. Employees from a similar department can not take the same courses together in real-time and maximise efficient learning through means such as collaborative learning.
- The organizations using Degreed as their sole resource are uncomfortably reliant on the platform. Any issues whatsoever would lead to the complete halt of the entire learning and scheduling process for the entire firm.
- A web-based application is reliant on internet connectivity and is also more susceptible to security threats.

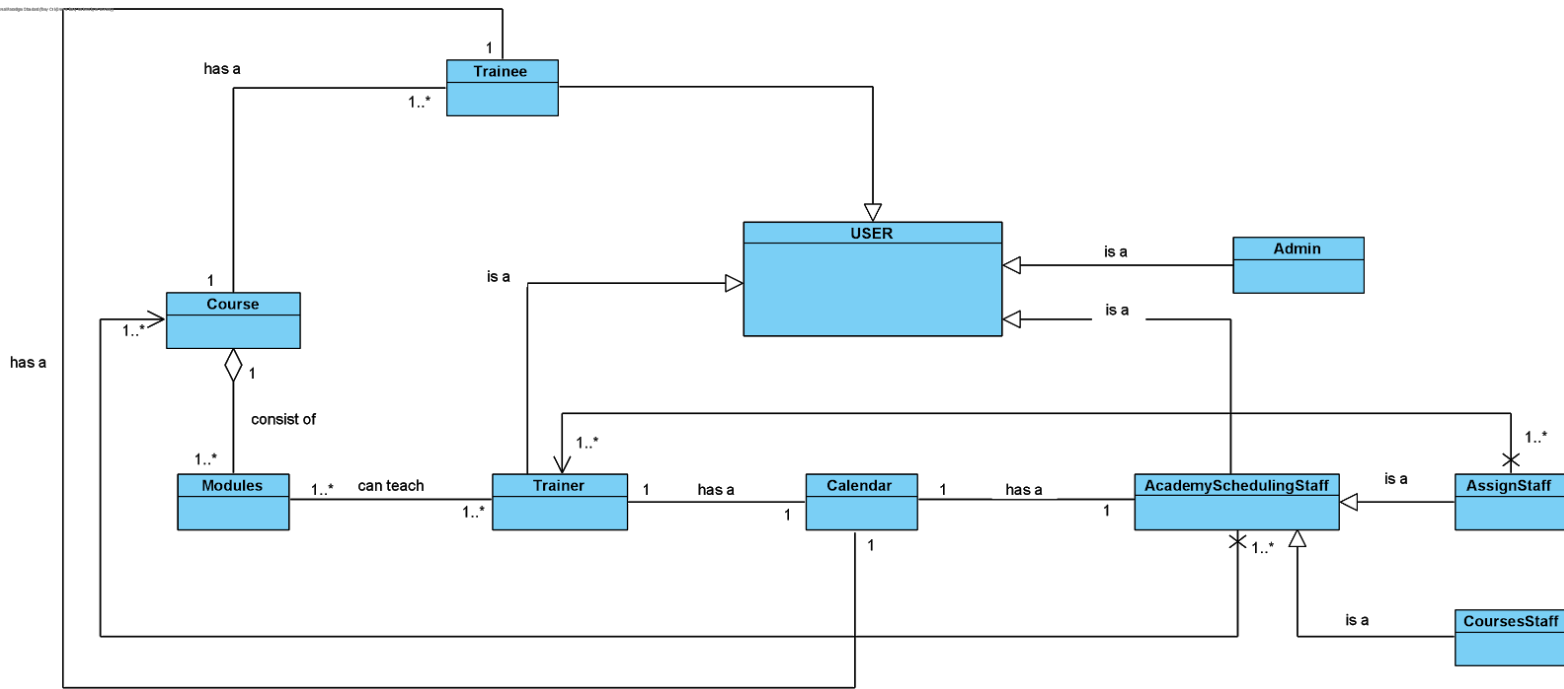
## Comparative analysis chart

The following table summarizes user responses for all the platforms listed above. None of the chosen metrics or their corresponding values are arbitrary. The average ratings were computed based on numerous reviews for each platform across multiple websites.

<b>Metric</b>	Ease of Use	Customer Service	Features	Value for Money
Arlo	4.6	4.7	4.5	4.5
Oasis	4.1	4.3	4.1	-
Degreed	4.3	4.3	4	4.3

*Figure 4*

## 6. Domain Model



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