

3D - The impact of ICT on the local community

Introduction

I live in the borough of Waltham Forest. Waltham Forest is quite an advanced community in terms of technology. Technology is used for various things, whether to make them more efficient or to provide a better service.

Walthamstow is a small town located within Waltham Forest, which also harbours Leyton and Leytonstone. It is located to the North East of London and bordered to the north by Chingford, to the south by Leyton and Leytonstone, to the east by Epping Forest, to the west by Tottenham and the River Lea valley. Walthamstow is identified by the London plan as one of the 35 major centres in Greater London.

Walthamstow's market is one of the longest daily outdoor markets in Europe and dominates the High Street. There are various shops lined along the high street with some high-end chain brands to several individually opened stalls that specialise in food, fabrics, household goods and other such stuff. The Mall in Selborne Walk is the largest place in the area to find lots of different brand shops selling high-end goods manufactured and produced to the mass public via corporations instead of individual businesses. The individual businesses tend to be all located outside on the high street.

The central library has also recently been refurbished and modernised. It was expanded from 2006-2007 to hold a wider range of books to serve to the public and provide a much better service.

Walthamstow also contains other things such as post offices, arcades, funfairs, charity events and a variety of different schools. These include the Frederick Bremer School (a coalition formed in 2008 of the two schools 'Aveling Park' and 'Warwick School for Boys'), Forest School, The Holy Family Technology College, Kelmscott School, Walthamstow Academy, Walthamstow School for Girls, Willowfield School and Sir George Monoux College.

There is also the Walthamstow Town Hall. The town hall is used for a variety of things, from important council meeting to being rented for other reasons of necessity e.g. during the Muslim holiday, 'Eid', the Town hall was used as a place of mass



prayer.

The National Rail and London Underground Stations include Walthamstow Central Underground and National Rail station, Blackhorse Road Underground and National Rail station, Walthamstow Queen's Road, Wood Street, Highams Park and St James Street. The biggest would be the Walthamstow Central Underground and National Rail station which is, as the name states, in the central of the town. It is located near the location of the main bus stations that go around the whole town and near the Selborne Walk Mall. This makes it quite an efficient place as people can travel throughout the town simply after arriving at the station. The station in particular is located on the East end of the Victoria Line, being the last stop.

The bus services are also quite complex. There exists a full infrastructure Hopper Service and a multi point-to-point network which is serviced to and from the main bus terminal in Walthamstow Central to a cross network passing through the centre and the outskirts.

The five pieces of technology I will be investigating, assessing and evaluating will be the following:

- Oyster-card/Travel system
- Librarian system
- ATM machines
- Waltham Forest Council website

- CCTV/Metropolitan website

Oyster card/Travel system

The Oyster card system is a system that functions throughout all of London, within the Tube and Bus services. It is a form of electronic ticketing which uses a database system to track travel information, linking it back to the owner of the corresponding oyster card, and charges them to the appropriate degree for the travelling expenses of the services they used. Oyster cards generally need to be 'topped-up' to be used and works similar in this function to a debit card.



The following travel systems incorporate the Oyster card: London Underground, buses, the Docklands Light Railway, London Overground, trams, certain river boat services and the majority of National Rail Services within the London Fare Zones. The Oyster card generally appears as the blue card seen above. It can be used as a single-ticket, period tickets and travel permit. It is also integrated with a Smart card system which uses certain data in the Oyster card to be able to, without using contact, be detected by Oyster card machines. Buses and train platforms use Oyster card machines to scan the card. Once the beep is identified, the person is let through.

However, there are also different versions of Oyster cards which also come with different prices and a different appearance. For example, the card to the right is an example of an 11-15 age group Oyster Card and is what all Oyster card holders in that age period hold. In this card, a photographic identification is needed.



How the Oyster card and London travel system meets the community's needs

The Oyster card is a small, portable, easy to carry card that carries on it the data of all your travelling expenses and money stored on the Oyster card system. Not only

this, but it also holds the advantage over tickets of being cheaper and providing discounts, with buses being completely free for 11 -15 year olds. All of these provide the incentive to switch from the out -dated ticket method to the modernised Oyster card system.

What this does for the community is provides them with a much more efficient and cheaper system. An oyster card can be topped up to a maximum of £90. This would be equal to about 45 single tickets but the oyster card is capable of carrying this all in one simple card that stores data inside it. People can be much more organised with this system and save a lot of money in the long run. They can keep track of their travels and how much they are spending.

Its portability is another thing that is extremely valuable to people who use the Oyster card system. People don't need to go and purchase a ticket and sort it all out. All they need to do is get their oyster card, tap it on the system and their travelling business is sorted! It makes travelling using public services much more simple for anyone using it. The smart card feature instils a small bit of data into the card, meaning that its data can be detected with the oyster card readers the government installs. People don't have to take their oyster card out of their wallets as the card reader can detect the card through wallets. This makes things easier, especially in crowded buses. The hassle of taking everything out, locating the card and removing it can overcomplicate things and waste time. The smart card feature takes away this long process and gives people the ability to simply tap and move on.

The travel system incorporates a countdown system on trains and buses to allow people to approximately see when the bus/train will arrive, whether it'd be late , early or on time. People can use this to know when to be present at the station so they can have time to do other things and know when to be back at the station. This gives people the chance to spend their time wisely instead of waiting at a station not knowing how long left to wait and not wanting to miss the train or bus, either. The countdown system on the train is more accurate as it's all computerised but on buses, most of them are used via a time schedule on paper. The countdown system essentially allows people to organise their time, plan out much more thoroughly their journey and avoid being late to appointments.

There's a site created by the government that goes along with the travel system called 'Transport for London', accessed from www.tfl.gov.uk.

This site has information about everything regarding the oyster card system, the train system and in general, any public transport facility in all of London. But other than information, it also has a travel planner allowing you to plan a journey, avoiding any problems such as closed lines or to be aware of any accidents that have currently taken place. This allows you to plan a safe, fast journey with no obstacles delaying you. This helps people to be punctual on their journey.

The site also allows you to log on and view your information. Using this, you can check the money on your Oyster Card and top it up using a credit card. This means that you can pre-plan your journey to make sure you have enough money preventing any problems when travelling. You can also find other information on the site regarding oyster cards, e.g. losing the card, replacing the card, benefits and many more.

Buses have the ability to be manually stopped at certain stops but also have the choice to go past the stops. This means that unnecessary stops where no one needs to get off or no one needs to get on can be skipped thus saving time and allowing people to get to their desired destination faster. People can plan where they want to stop or skip the stop if needed. There is also the emergency stop which stops at any location in case something dangerous happens. This allows people to get off the bus in case of a casualty of some sort.

As mentioned in the countdown system, buses have quite a strict schedule they need to follow. The schedules are all listed in each bus stop or on the tfl.gov site so people know when a certain bus will arrive. This can be more useful than the countdown system as the schedules stay the same every day. This means that people can plan their journey right to the dot and get to the station right when the bus arrives. People know when exactly to arrive, so they aren't too early or too late. This saves them time.

Summary

- While not completely necessary to use public transport in Waltham Forest, it provides the incentive of discounted use of trains and buses, with buses being completely free with an 11-15 Oyster card
- Easy to carry and easy to handle on buses and trains
- Smart card feature allows a much easier contact/purchase of transport service, only needing a touch of the Oyster card and nothing more

- Countdown system in buses and trains give people a lot more preparation and organisation to their daily schedule
- Transport system has its own website—‘Transport for London’—that displays all kinds of information and latest news regarding the transport system
- Buses can be manually stopped and requested to stop at certain stops and if no requests are made, no stops happen thus saving time and helping people get where they want to faster
- Buses all follow a strict schedule so people know when to expect a bus to arrive and at exactly what minute of the hour

How it fails to meet the community’s needs

A lot of times, you naturally assume that the bus will stop. However, if there is no one needing to be picked up or no one who has pressed the button to stop the bus, then the bus would simply carry on. This can cause a lot of people to be late due to carelessness which happens quite a lot. People have to stay alert when their stops are coming by otherwise the bus might simply pass it before they realise.

Oyster cards are small and can be lost quite easily. They also cost quite a bit to replace and take up to a week for a new one to arrive. This can put a halt to travelling plans or force you to spend extra on buying tickets.

Oyster cards, when lost or stolen, can still be used unless reported stolen. As a lot of buses or trains don’t generally check if the ID/photograph matches, someone can easily just use your oyster card for their own travelling needs and use up your own money supplies topped up on the oyster card.

While buses have a schedule, they can ruin it by coming late. This can be due to an emergency, an accident or just simple traffic. They can also come early causing some people to miss the bus and they’d have to wait for the next one. This can cause a few problems for people in terms of punctuality.

Summary

- Manual stops cause you to miss yours and ruin your schedule
- Oyster cards cost a lot of money to replace and are quite easy to lose
- Oyster cards can easily be used by a thief using your own money without being detected

- Buses can ruin schedules by coming late due to an accident of sorts

Conclusion

The Oyster card/travelling system is extremely useful for a citizen in London. It's an extremely advantageous system to have and people benefit tremendously. It saves a lot of money for people in contrast to the previous ticket system and makes people's travel much more organised and safe. People can premeditate their plans and journeys and plan through any foreseeable interruptions. The community find it much more beneficial in terms of arriving on time.

Walthamstow Library/Librarian system

A library is essentially a building or room containing books, periodicals and occasionally DVDs or CDs ranging from music to movies for people to loan for a period of time. It can also be a place to study, access computers, access a WiFi connection and lots more, depending on the library.

The library in Walthamstow is called the 'Walthamstow Library'. It is located on the Walthamstow High Street, one of the biggest high streets in the country. This means it is easily accessible to a large range of people as the high street is linked to a lot of transport facilities. Its area is extremely efficient as it can take advantage of the large amount of shoppers and shops in the area. It is open every day apart from Thursdays and Fridays. As well as providing the usual functions a library would, it also provides events to kids and even adults in the area such as specialty classes (computer, reading etc.). But the most beneficial thing a library provides to its community would be the loaning of books, DVDs and other such things which is essentially controlled by the librarian system.

The library system in Walthamstow also connects with the library systems in other towns in London. They all share one database. Having worked in Leytonstone Library, I had access and in-depth experience to how exactly the librarian system works in the community. The library system works in correspondence with a library card which links to a database called 'OpenGalaxy'. This database contains information of all the people who signed up to any of the libraries in all of London, unless they use another database. It also contains information of all the books in London that have been sent to the library. These books are then linked to each

person in the database when they either loan or return it. The library can easily track each book and who it is currently loaned to using this system.

How Walthamstow Library and the Librarian system meets the community's needs

The OpenGalaxy system essentially allows anyone, as long as they have simply signed up for a free library card, to loan a book, CD or DVD. Books are free to loan and CDs and DVDs come at a small charge. This allows people who can't afford to buy such things to simply borrow them and give them back. People have free or cheap access to things they usually would have to pay for. People of all kinds are allowed to enjoy books due to the library.

People can use this system to reserve books from libraries not just in their local one, i.e. Newham Library and such as the system is connected between all the branches. This means that it is much easier to track a book you might not be able to find elsewhere as there is a large source in which you are searching in.

People can also have internet access via laptops due to the public WiFi connection in the library. People who don't usually have access to such privilege can do so via the library. They can do all sorts of things to the internet e.g. research, study or even play games.

There is also a 'quiet room' where these people can go so they won't be disturbed in any way. People can find a place to go to where they can focus and not be distracted.

The library also gives people free access to computers as long as they have a library card. People are given the chance to work on these computers if they don't have one themselves and it's all a free service. This means that people who can't maintain their own computer or internet are given the chance to via a library. The library becomes an important place for people like this.

The library also offers children/adult sessions on various things like singing groups, computer classes etc. These can be extremely helpful for busy parents who can simply leave their children here where they would be looked after and socialise with other kids. Adult sessions also mean that uneducated people can be taught how to do certain things that are necessary in this modern age e.g. use a computer which is an essential skill to keep up with the fast modernisation of the world.

People who don't have access to a printer or photocopier at home can use the library. This means that people save money on not having to purchase their own printer and photocopier as they can simply use the library. People can print out work or photocopy posters and such using the library.

Summary

- People can loan a large variety of books, CDs and DVDs
- People can use this system to reserve books not limited to their local branch
- People can use the library to connect to WiFi
- People can use the computers free of charge as long as they have a library card
- People can use the 'quiet room' to study in the library
- People can take advantage of the library's children or adult sessions
- People can take advantage of the photocopying/printing privileges

How it fails to meet the community's needs

The library has a minimal amount of faults as they are a funded public service to the community and do well in serving and providing to the general public.

However, there are a few. For example, a library card has your library identity in it. If it gets lost or stolen and goes unreported, people can take books and not return them all under your name, thus giving you the blame.

Also, the library card is extremely harsh with overdue books. If a book goes overdue, you have to pay a large fine or you cannot use the loaning system any longer. This fee soon increases if you don't pay and eventually becomes impossible to pay for some people as they would either refuse or just not bother with such a high amount.

People would also have to pay an exaggerated amount if they lose the book. This can be a problem to people who cannot afford to simply pay this money, stopping them from loaning any more books.

Summary

- Library cards can be easily lost or stolen and used to steal books under your name
- Pay a large fine for books you have lost or not returned within the due date

Conclusion

The library is a place with many uses and helps the needy who can't afford their own resources. It is an extremely valuable asset to the community as it provides a place to gain knowledge, finish work and study in peace.

ATM machines

ATM machines, also known as the automated teller machines, are public and easily accessible machines that give you the ability to access your bank account without the need of going to a banker, cashier or any kind of human interaction. They generally work via a pin number and an insertion of the credit card into the ATM. It then displays your credit card credentials, balance and gives you the option to withdraw and deposit your desired amount.

How ATM machines meet the community's needs

With the ATM machine, people save the time by not having to go to a bank and wait in a long queue. An ATM machine simply does all these things for you. You can check your balance and withdraw plus deposit money. It's a very efficient method of transferring money from your bank account.

It's a quick, fast and simple method to use. The ATM machine has easy instructions to follow to use it so even the most novice person can use it just by following the instructions given. You simply have to enter your credit card, pin number and then the action you want to take. This makes it easy for a lot of people to transfer money and saves a lot of time.

It's located in a lot of ideal and efficient areas, such as outside a supermarket. This allows people to use them when they're in a dire need of money without having to do something elongated such as going to a bank to withdraw a simple amount of money. If you forget some money you need, you can simply go to one of the easily accessible ATMs which are located in a wide area. This saves people a lot of hassle.

The ATM machine can print receipts so if there are any errors due to a technical difficulty, you have proof that the transfer did take place. This saves a lot of problems that occur with the ATM machine and allows the transfer to be much more secure.

If people stole your credit card, they could just take it to an ATM machine; steal all the money, leave the credit card and run away. The need of a pin number, which

should only be known by the owner of the card, prevents this. A lot of credit card fraud is negated this way.

Summary

- Negates the need of the prolonged method of going to a banker
- Quick, fast and simple to use
- Located in a lot of areas allowing you to withdraw money in a large variety of places
- Allows you to get money out when you most need it, meaning you don't have to carry large amounts of money wherever you go and put yourself at risk
- Printable receipts so you can have proof of withdrawal or deposit in -case a problem occurs
- Need of pin number prevents a lot of fraud

How it fails to meet the community's needs

However, credit card fraud still takes place even with the need of a pin. It is easy to peek over and see what exactly the pin number is. This can also work with fake ATM machines to steal a lot of money from people. ATM machines are located in a lot of different places so it'd be hard to tell if an ATM machine is fake or real. People can easily be taken advantage of in this way. Con artists can place ATM machines and use it to steal or copy a credit card and take a pin number and use it to steal lots of money from the credit card. People can easily be stolen from in this way.

People are also easy targets to being mugged. If you are seen coming from an ATM machine, people assume you are carrying a mystery amount of money on you. This puts you as an ideal target for thieves who see you coming from an ATM machine. That's why it is very dangerous to use one in a secluded area.

The efficient, easy use of an ATM machine to withdraw cash can also be a big downside. With the ease of money transfer which is supposed to be securely stored, it might tempt you to withdraw too much for personal needs. ATM machines are strategically located outside casinos so when people gamble, they might be tempted to withdraw more money, especially with how easy it would be.

Summary

- Easy to fraud despite the need for a pin

- Fake ATM machines placed in random locations by thieves and con artists might be used
- Easy target for theft if seen coming from an ATM machine
- Can tempt you to spend too much, especially if placed outside something such as a casino

Conclusion

ATM machines can be seen as being essential to a community as they allow the community to transfer money much faster and stops banks from being overcrowded. However, a lot of ATM machines in unsecure locations may put you at the risk of credit card fraud. So, while using the m might be useful in terms of saving time and practicality, you are also put at the risk of being a target of criminals.

Waltham Forest Council website

The Waltham Forest council website is an extremely useful website that can easily be accessed from any computer, as long as they have internet. It provides help with living in the community and information regarding lots of things, such as education, jobs, leisure, information on services in the community e.g. timetables, open dates, events, and many more. People can access a feature called 'My services' where they can do many things such as apply for housing, jobs, parking permits etc. to paying council tax and checking business rates and paying off parking fines. It provides a lot for this community and supports the whole community's needs in lots of different ways.

How the Walthamstow Forest Council website meets the community's needs

The vast amount of information which the site holds involving the borough is staggering. Anything you need to know is located on this site. You can learn about events, shops, clubs, schools and many more. People can use the site to find out all they want about the area they live in.

People have access via this site to do things related to fines, taxes and other such things. This means that people won't have to get out of their house to do such things. It can all be paid via the website. This is extremely efficient and saves the community a lot of time.

People can use the site to find any vacancies in the area in different areas of the job market. They can have up to date information on when a vacancy opens and do all they can to try and find a job, whether it be part time or full time. This is extremely useful to the large amount of unemployed who can simply find any open jobs using this site without having to go to job centres and such.

Parents can look up education and find the best schools to go to in the area for their children using the site. They can find which school would fit their exact location and needs. This is extremely useful and helpful to children as parents can choose which school would suit their child best.

You can find any current events or news that happen in the borough via the site. You can keep up to date with anything that happens. This beats the need for newspapers and makes sure people don't miss any community events.

Summary

- A large amount of information pertaining to the borough
- Access to services and ability to do things such as pay fines and taxes which saves time doing it in real life
- Find jobs in your area
- Look up schools in your area
- Find out any current events happening in the borough

How it fails to meet the community's needs

The website does not necessarily have any disadvantages. But it does need an internet access which a lot of people still don't have or know how to use.

Summary

- Needs internet access

Conclusion

People, living in not just Walthamstow, but the whole of Waltham Forest benefit greatly from this site. They can keep up to date with their lives and know everything going on in the surrounding area. They can find out about jobs, education and other important factors of life.

CCTV/Metropolitan website

The CCTV system and the metropolitan website both work in keeping finding and keeping crime off the streets.

CCTV, which stands for closed circuit television, is a system which uses video cameras to monitor a certain location which happens by sending the footage to the corresponding office it is connected to where it is viewed by the security of that particular place. For example, they could be cameras showing footage of a school, a supermarket or any other office environments. CCTV is generally used for surveillance. They are generally in places where there are risks of crime taking place.

The metropolitan site is used to help capture crimes not seen by CCTV cameras or lacking evidence. People can report crimes and also stay confidential. This can allow people to supposedly 'snitch' without the fear of being caught for snitching.

How CCTV and the Metropolitan website meets the community's needs

When a criminal sees that a CCTV is in the area, they think twice about committing a crime. This is the first step CCTVs do in reducing crime. The fear of being caught on camera stops the crime from happening in the first place.

If a crime *is* captured, then it can be used as evidence in a court case. It can be shown to prove that a person did commit a crime and help put the criminals behind a bar. This makes the community much safer not only knowing that CCTV would capture the crime if it took place but also that the criminal is locked up behind bars.

The method of sending the video feed captured on a video camera back to where it's being monitored is quite efficient in that it's effective and fast at sending the information back. This makes it easier to capture criminals as the system works in a speedy way.

Places such as schools where kids are most vulnerable are kept safe. If a stranger appears or something extremely dangerous happens, CCTV can be used to find the culprit. Dangerous people such as child molesters are found and arrested making school safer and making the kids feel much more secure being in school.

The most effective use of the CCTV is that it can be placed in a large variety of places, watching crime from even the most dangerous areas. This allows it to be able to reduce crime no matter where it takes place.

The metropolitan website aims to make London a much safer place. This provides reassurance in the community and they have access to a lot of the resources located in the site.

People are able to confide in crimes while keeping their identity a secret. This stops people from being scared of being caught for snitching which can provide harsh consequences for the snitch in relation with his friends. The anonymity provides reassurance and a sense of security.

Summary

- The simple presence of CCTV deters criminals
- If it captures a crime, it can be used as evidence
- Efficient method of sending camera feed to the corresponding connection where it is being monitored
- Keeps places such as schools safe
- Can be placed wherever it needs to be
- The website aims to keep London safe
- Allows people to confide in crimes they've witnessed while staying anonymous
- Provides reassurance to people who are having from witnessing a crime

How it fails to meet the community's needs

However, people do complain that CCTV makes for a lack of privacy for people. People feel that it invades what should be personal space.

It is also quite expensive and advanced to set up as a whole. The CCTV system requires skill and knowledge of ICT to be able to set up properly and also a lot of money.

Summary

- Invasion of privacy
- Expensive to set up
- Can be quite advanced to set up

Conclusion

Overall, CCTV and the Metropolitan website work extremely well in keeping London secure and crime free. People are less worried about crime wherever they go and it adds an assurance to people knowing they are being protected.