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BUILDING A WEB-STORE USING PRESTASHOP PLATFORM

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PrestaShop Platform
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ABSTRACT

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Online commerce is a well adopted new mean of business. Most of the businesses have migrated or are migrating online. Migration for big commerce company may be difficult but not a problem for small company or startup. Most of the resources to conduct e-commerce activities are available free of cost and easily available online.

The commissioner wanted to expand his business to country level. To do this, the easiest way was to adopt e-commerce. He knew, e-commerce will boost his business as well as he will have country level recognition on internet in his niche.

In this thesis, the installation and preparation of e-commerce platform to conduct online business activities will be discussed. E-commerce platforms, include WooCommerce and PrestaShop, and integration of both e-commerce platforms with Sello.io explained.

I already have knowledge of online blogging platforms like WordPress, Joomla and Blogger, as well as knowledge of e-commerce using WordPress. I will help commissioner to achieve his goal by implementing my knowledge. The knowledge from books, journals, articles and online resources available will also be used for information collection and implementation.

Keywords: e-commerce, wordpress, woocommerce, prestashop, sello.io,

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1 INTRODUCTION

Internet is a miracle of our time. It has made our lives easy. We can use it to connect others, to gain information and knowledge, to procure goods and services, to learn new things, and many more things. It can be used by engineers, doctors and surgeons remotely to do their observations, discussions and operations. It can also be used to conduct businesses.

Online business activities are called e-commerce. It is only three decades old form of conducting business but it is growing rapidly. Every business wants to adopt it. They know the coming time is for online business. Internet can be used from buying a needle to ordering a plane.

Now a day, adopting e-commerce solution for a small business is not difficult as well as costly. Internet provides free tools and services for these new comers. Some of the tools are not only free but also open source. Open source tools can be modified as needed. There are online communities and forums which have developed these tools and do modification at minimum to no charges.

1.1 Objectives

The objective is to create an online store for brick and mortar selling spot in Sweden. The commissioner is already using some third party online services to sell the goods. He decided to have own service as well. Having own web store will give his business an online identity, which will help him to further establish and increase the business activities.

The commissioner's name is Kamran Mirza. He is conducting his business in Gävle, Sweden since 2013. He started using third party e-commerce platform in 2014. His decision to have own online store in 2015 is based upon having successful e-commerce experience through third party e-commerce platforms. The web-store can be accessed on <https://eustore.se/>.

The commissioner is selling smartphone accessories which is the main business activity. He also sells caps, gents' wallets, ladies' handbags and headphones also known as hand free, as additional items for business activities. He is planning to extend the business activities by adding more inventories related to computer accessories.

Before expanding the business activities, the commissioner wants to have own online identity. For this purpose, the best suited solution was to have online store. Though, he is already using third party portals to conduct e-commerce activities, getting own e-commerce platform will give him advantages like direct interaction with customers, own platform for e-business activities and an identity to his business on internet.

1.2 Activities

It is important to have knowledge about the features of e-commerce platform which is going to be selected. There are some features which are common among most of the e-commerce platforms and there are some which are not common. The common features are inventory management, customer order, catalog, etc. Adding some other add-ons can integrate some other features like usability, search engine optimization, security, designing options, etc.

To manage the stock for online selling, the commissioner is using an online stock management tool available at Sello.io. In reality, Sello is more than just a stock management tool. Using Sello services, the user can manage most of their activities related to e-commerce on Tradera, CDON.com, Amazon, FYNDIQ, PrestaShop, WooCommerce and SelloShop. Sello services help user keeping stock up-to-date, synchronize the online markets updates with stock management at Sello, communicate with customers, order status, creating receipt, bookkeeping, creating different types of labels, creating or importing products from different marketplaces, updating products, editing products, grouping products, and much more.

Using Sello services, user doesn't need to go to each e-commerce market one by one and manage the stock, that all can be managed on Sello portal. Though, Sello has lots of advantages to commit e-commerce activities, there are also some limitations. The limitations limited the selection of e-commerce platform, thus, commissioner had no choice but to select one e-commerce platform out of WooCommerce or PrestaShop. Because of this, the selection of e-commerce platform seemed straight forward and very easy. In reality, the selection was not that easy and there were quite unavoidable hurdles on the way.

The integration of new e-commerce platform with Sello services is very important. The one, among WooCommerce and PrestaShop, which will have better integration, will be adopted as new platform for online business.

The commissioner did not have a lot of requirements than whatever he had seen on other e-commerce platforms. He asked the web-store should have catalogue, menu, payment options, easy navigation, shopping cart, search engine optimization and security for customer as well as for web-store owner. Integration with Sello services was also a major requirement. He also preferred the free solution.

1.3 Limitations

There are limitations in this thesis. This thesis will only discuss about the sales of physical goods to end-users. Thus, the e-commerce category related to this type of business will be explained and other categories, which discuss the sale of virtual goods and services will not be discussed. Shortage of time and nature of the business are also two compelling reasons to not to discuss other types of e-commerce.

The other limitation is the cost of available e-commerce solutions. To make the e-commerce solution cost effective, only free of cost solutions, plugins and add-ons will be considered for the implementation. Using free solutions will minimize the overall cost of creation of online web-store. For any problem, the solution will be sought from help freely available on internet. It may the authority of the e-commerce solution will be contacted for any free help.

Sello only supports WooCommerce and PrestaShop for self-hosted e-commerce solutions. WooCommerce will be the first choice for implementation and integration. PrestaShop will be put to alternative only if WooCommerce does not integrate as required with Sello.

2 E-COMMERCE

Commerce is a wide topic. It has many kinds, some of them Brick and Mortar, E-commerce and Sharing Economy are the most famous among all. Merriam-Webster defines commerce in simple words, “activities that relate to the buying and selling of goods and services. The bigger definition includes a large scale trade between different countries or between different parts of the same country”. (Dictionary 2016b, cited 21.8.2016.)

“The exchange of goods or services happens for money or it’s like. It requires transportation because of large scale quantity from one place to other, locally, regionally, nationally or internationally”. (BusinessDictionary 2016a, cited 21.8.2016.)

Since the humans started interacting each other, they got involved into trading the goods with others. Exchanging goods and services were not so easy. Value consideration of goods or services created problems and with the introduction of currency as standard money, goods and services trading were facilitated. Money could be in shape of lumps of precious metals like gold, silver, etc.

2.1 Brick and Mortar

According to Merriam-Webster definition (2016a, cited 21.8.2016), “relating to or being a traditional business serving customers in a building as contrasted to an online business”. InvestorWords (2017, cited 13.2.2017) describes it as, “A description of a company or portion of a company with a physical presence, as opposed to one that exists only on the internet”.

E-commerce is being widely adopted by shoppers but a majority of buyers still prefers the physical store. Buyers can browse and try products in physical store before making the purchasing decision. Physical interaction with goods produce confidence among shoppers. It encourages them spending. Though e-commerce is on rise, brands are also adopting this old tested method of brick and mortar. Many companies like Warby, Birchbox, etc. also developing their brand thorough brick and mortar presence. (Baldwin 6.10.2016, cited 11.2.2017.)

Brick and mortar suffers high startup costs, which may include rented property and employees' salaries. It may also need a big investment to cover the startup and other costs like utilities, insurance, inventory, etc. To serve local community, a physical store may be just fine. However, for national or international level, virtual store is more convenient than physical store. (Ngwabi 2017, cited 14.2.2017)

People, with the access to latest technological instruments, prefer online shopping at their convenience. Online experience makes people aware of the availability of product stock and prices, even though they have to go to a physical store to do purchases. (Lawson 2015, cited 14.2.2017.)

2.2 Electronic Commerce

Electronic commerce also called e-commerce and e-commerce is trading of products or services using computer networks like Internet or online social networks. According to Merriam-Webster definition (2016c, cited 11.2.2016), "activities that relate to the buying and selling of goods and services over the Internet".

Zorayda Ruth Andam (3.2003. 6) has presented more complete and robust definition of e-commerce is, "E-commerce is the use of electronic communications and digital information processing technology in business transactions to create, transform, and redefine relationships for value creation between or among organizations, and between organizations and individuals".

According to Statista.com (2016, cited 21.8.2016), in 2013 the global e-retail sales were around 839.8 billion U.S. dollars. They have projected that it will rise to 1.5 trillion U.S. dollars by 2018. But they also showed the current valuation of business to customer sales worldwide is 1471 billion U.S. dollars.

2.2.1 Types of E-commerce

In e-commerce, two most common participants are businesses and consumers, thus, four basic types of e-commerce can be formed as Business-to-Business (B2B), Business-to-Consumer (B2C), Consumer-to-Business (C2B) and Consumer-to-Consumer (C2C) (Khurana 2.8.2016, cited

8.9.2016). The above mentioned types of e-commerce have been widely accepted and adopted by different authors in their writings.

Business-to-Consumer (B2C) (see figure 1): Website selling their products directly to customers are doing business-to-consumer electronic commerce (TutorialsPoint, cited 24.8.2016).

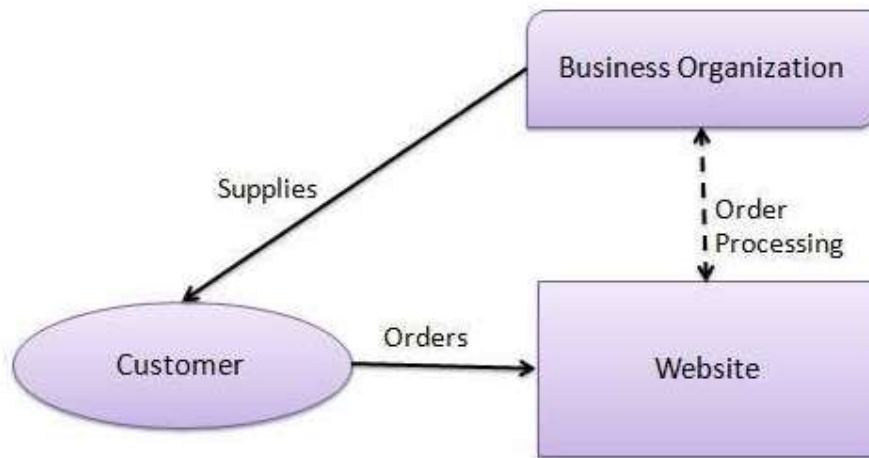


FIGURE 1. Business to Consumer (B2C).

http://www.tutorialspoint.com/e_commerce/e_commerce_business_models.htm. 2016. cited 24.8.2016.

Because of internet, there are already many virtual stores practicing e-commerce. These online stores are selling a variety of goods including computers, software, books, shoes, grocery, food, digital publication but not limited to. (Bloomidea 5.10.2014, cited 8.9.2016).

Business-to-Business (B2B) (see figure 2): B2B can be defined as online commerce between two or more companies to conduct businesses (Bloomidea 5.10.2014, cited 8.9.2016).

There can also be a middle man who buy the products from one entity and sells it to other entity which can be final customer. For example, wholesale dealer buys online from a company and sells it to final customer. (TutorialsPoint, Cited 24.8.2016).

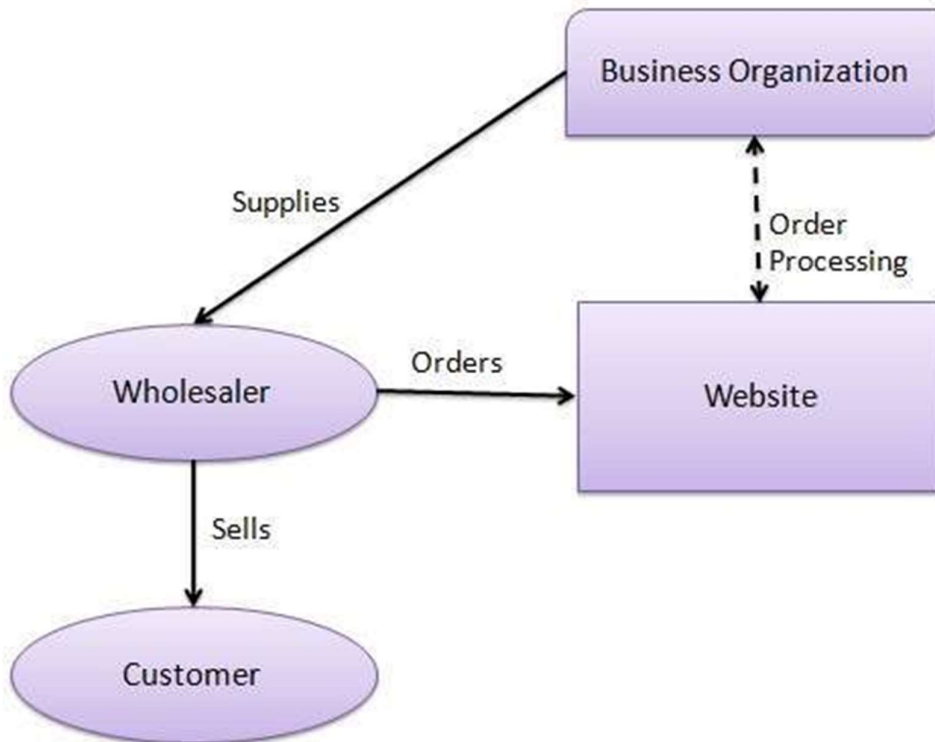


FIGURE 2. Business to Business (B2B).

http://www.tutorialspoint.com/e_commerce/e_commerce_business_models.htm. 2016. cited 24.8.2016.

Consumer-to-Business (C2B): In C2B (see figure 3), consumers usually post their products or services online on which companies can post their bids. Consumer reviews the bids and selects the company that meets his/her expectations. For example, designers selling their creations on iStockphoto, etc. (Bloomidea 5.10.2014, cited 8.9.2016).

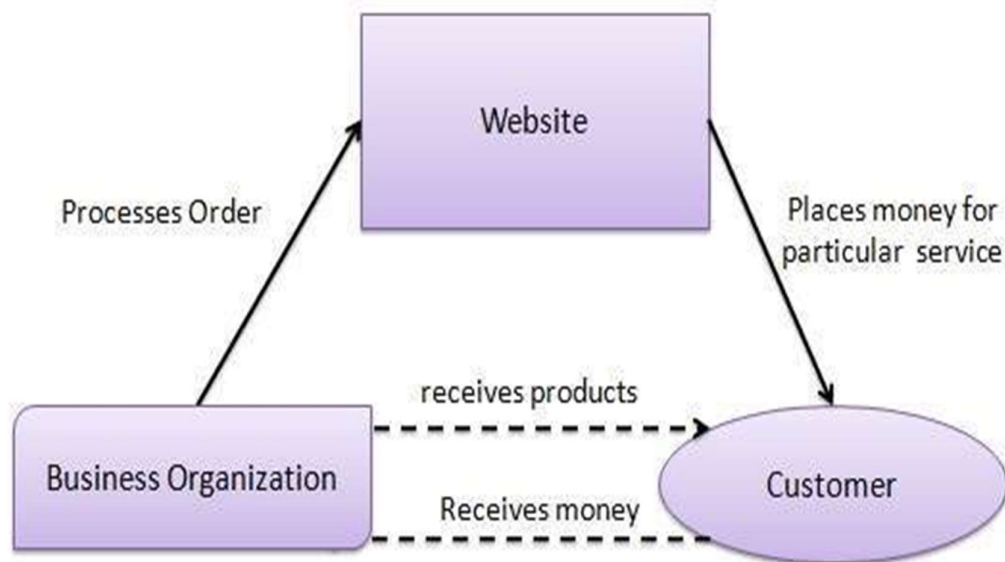


FIGURE 3. Consumer to Business (C2B).

http://www.tutorialspoint.com/e_commerce/e_commerce_business_models.htm. 2016. cited 24.8.2016

Consumer-to-Consumer (C2C) (see figure 4): In a Consumer-to-Consumer E-commerce environment, consumers sell or rent their goods or services to other consumers. Most probably, these types of activities happen through third party portals which provide online services. (Bloomidea 5.10.2014, cited 8.9.2016).

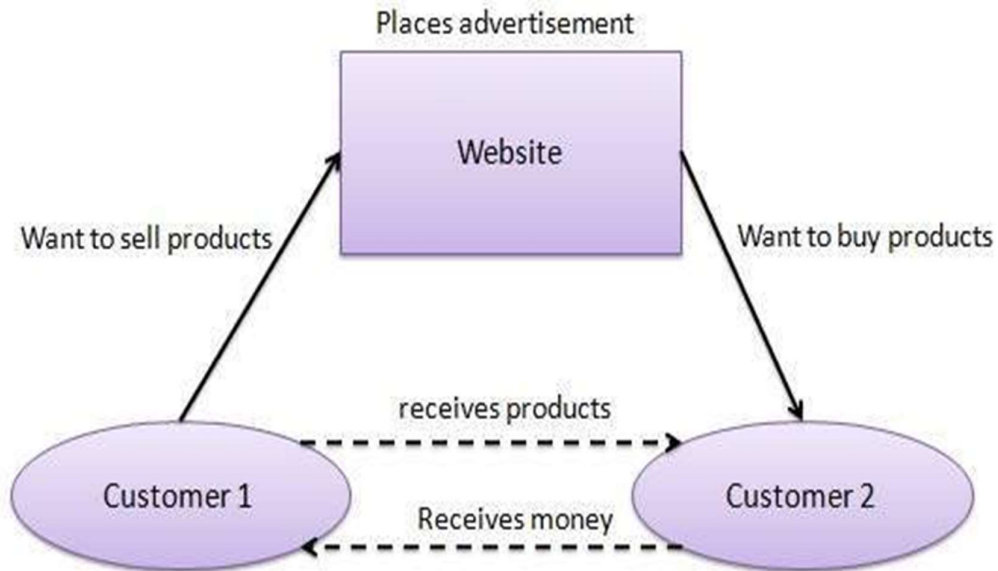


FIGURE 4. Consumer to Consumer (C2C).

http://www.tutorialspoint.com/e_commerce/e_commerce_business_models.htm. 2016. cited 24.8.2016

2.2.2 Components of E-Commerce

Dragan (2016, cited 24.8.2016) talks about components of e-commerce precisely. Usually the information found about e-commerce is related to marketing. It is common assumption that marketing is everything but it is not the case. There are other elements necessary for successful e-commerce like Supply Chain Management, Warehouse Operations, Shipping and Returns, Client Relationship Management, Catalogue, Marketing, and Offline sales etc.

A continues supply of products is very important for any e-commerce that is what big retailers do. The suppliers should be reliable, sound, have stock inventory and should be able to deliver the stock, when needed, rapidly. This is also known as Supply Chain Management. (Dragan 2016, cited 24.8.2016). Supply chain activities contain product development, transformation, stocking, sourcing, production logistics and information system to keep these all activities in a managed sequence (NC State University 11.1.2011, cited 15.4.2017).

Online retailer should be able to stock the products for on time delivery. For this purpose, it is important to use some sort of warehouse management system which then enables the retailer to track all the ins and outs of products to and from warehouse. (Dragan 2016, cited 24.8.2016). When

online store goes out of some product inventory, it may affect the customers and as a result will have effect on profit. Inventory should be kept at balance. This will not restrict the cash and the retailers will be easy to have more stock if needed. (Palzkill 4.1.2011, cited 14.4.2017.)

The product shipment on time is very important for an online retailer. The buyer should be informed about shipping and possible delivery time. For this matter, integration of shipping services into the system is better. It is also that the retailer should be able to accept returns of the products if returned from buyers. (Dragan 2016, cited 24.8.2016.)

It is a policy describing how the customer should be handled. For this purpose, customer behavior is recorded and analyzed. Client Relationship Management (CRM) helps the retailer engaged on the online store, and presents the best related products, best shipping, prizes, etc. Rewards for customers will earn the loyalty and will also do the marketing. (Dragan 2016, cited 24.8.2016.)

Buyers have disadvantage of not being able to hold the item in their own hands for physical inspection. To overcome this problem, a comprehensive online catalogue of the product can make the buyer's mind for shopping. (Boyd 29.7.2013, cited 16.4.2017). Attractive images of product will attract the customer. A better arranged digital catalogue will engage the visitor longer which may compel the visitor for shopping. Search engines also take part in the store publicity. Better hierarchy and optimized order of products increase search engine optimization. Better search options and proper layout of catalogue is best. Having physical place for store is good for online store. Some customers want to feel the product before they buy. (Dragan 2016, cited 24.8.2016.)

SEO has the same importance as the other components of an online store have. SEO is used that online store be found for the search terms and phrases when people do search in search engine. For better SEO, the must have elements are better writing, purposeful contents containing the words and phrases used by people when doing online search, people should be able to share your contents on different forums, customer portals and social media, etc. (Red Evolution 2017, cited 13.4.2017). Advertising, email marketing and branding also play important role (Dragan 2016, cited 24.8.2016).

2.2.3 Advantages of E-commerce

Amir (2010, 22 – 23) has briefly described the advantages of an e-commerce, like easy business, product customization, advantages for start-ups and small businesses, low cost, cheap products, mass reach, etc. E-commerce helps startups and small-to-medium size businesses to reach majority of people. People can select, customize and order the products according to their needs and desires e.g. Dell.com allows customers to customize a computer.

It can also help finding the business partners across the globe. A company can create network with different companies and do network production. It reduces the cost of production. With network production, a company can order other companies across the globe and can deliver with own marking. (Amir 2010, 22 – 23.)

A customer can do shopping anytime of the year on an online store. They also get wide range of product choices across a huge number of e-commerce stores. They can conduct quick comparison from different online stores. This helps the customers to make appropriate decisions regarding the purchases. (Amir 2010, 22 – 23.)

E-commerce reduces the administrative charges, simplify the process, add flexibility, and reduces valuable time. Thus, helps lowering the costs of products compared to brick and mortar stores. It lessens the labor cost, product cost, transaction cost, administrative cost, etc. With lower costs, it helps in expanding the business. (Amir 2010, 22 – 23.)

Society can hugely be benefited from e-commerce. E-commerce can be done from home, thus lessening the traveling time to go to work, which reduces the traffic and pollution as well. With less expensive products on online store, less wealthy people can do purchases resulting increased standard of living. (Amir 2010, 22 – 23.)

2.2.4 Disadvantages of E-commerce

Online business is a different world for those who have done traditional businesses. They do not have direct interaction with customers, no face to face dealing; money is processed online as well as refunds are done online. (Amir 2010, 22 – 23.)

It is difficult to calculate variable costs and benefits for online business. This can be changed rapidly based on the technology which is changing quickly. It is difficult to hire an experienced employee, who has technological and business skills, to operate an e-commerce business effectively. (Amir 2010, 22 – 23.)

One other big problem could be software integration to existing payment-gateways and databases. There are companies who provide such services but these services can be expensive. It is important to do research on this matter before any selection. Some other disadvantages of e-commerce are insufficient server bandwidth, low internet speed on customer side, rapidly changing software development and implementation, online frauds, but not limited to. (Amir 2010, 22 – 23.)

2.3 Sharing Economy

Sharing Economy is also called Collaborative Consumption or Peer Economy. In sharing economy, people rent out their belongings, which they are not using, to others using peer-to-peer services e.g. car, house or services. (Forbes, cited 8.9.2016.)

With the adaptation of new technology like internet, sharing belongings has become easier and cheaper. Earlier, it was possible to share the stuff but was more troublesome than now. New services like Airbnb, SnapGoods and RelayRides with the help of internet, has accelerated the sharing economy concept implementation. Now user can easily find the needed stuff available at the nearest spot. (The Economist 9.3.2013, cited 8.9.2016.)

3 CHARACTERISTICS OF AN E-COMMERCE PLATFORM

To start an e-commerce business, selection of proper platform is very important. There are hundreds of books, thousands of articles written about it. A simple query “*what characteristics an e-commerce platform should have*” on Google fetched 578000 results.

It is impossible to write all the characteristics of an e-commerce platform should have. There are a few but important features, which every e-commerce platform should have.

3.1 Usability

Usability guru Jakob Nielsen has defined usability as the most important part in any website design. He defines usability as ease-of-use by user. A website should be easy to navigate, easy to remember, provides user satisfaction, easy to perform the desired task by user and should be able to be memorized for longer time. If the website is difficult to navigate, doesn't clearly provide the aim of business, users cannot locate for what they are looking for on the website, clearly shows the usability is failed. Failed usability may result in the lost user on the website. Once user is lost, he will leave the website. (Nielsen 4.1.2012, cited 5.4.20106.)

High speed internet reaching in every home. Users also do not like slow loading website and bad design which makes navigation very difficult. People are busy, they will just go away. This may result in low conversion. (Hallam 15.1.2015, cited 16.4.2017). Bad usability can convert even an interesting concept into disaster. To have better usability, a designer must consider intuitive design, easy to understand the hierarchy, easy to navigate, easy to remember and clear in presentation of the purpose. (Design Your Way 2017, cited 16.4.2017.)

Navigation plays vital role in customer's engagement on any online store. Ordered and hierarchical navigation keeps the visitors on the website. Good experience of visitor leads to better business. Better navigation makes the searches fruitful. Thus, better navigation and search options yields high conversion ration from visitors to customers. (Gust 2016, cited 31.8.2016.)

Better navigation helps user to locate and explore the item. It makes it easy for the user to put those items in shopping cart, and checkout in as few and easy steps as possible. (Getler 12.3.2014, cited 14.2.2017.)

3.2 Support Availability and Integration of Third Party Tools

Any e-commerce platform can have problems anytime. To rectify the problem, the platform should have support system already available. The support system may include documentation, audio and video tutorials, forums, knowledge database, support team, live support but not limited to. (Getler 12.3.2014, cited 14.2.2017.)

For the success of any e-commerce platform, the availability and integration of third party modules is very important. For example, most of the e-commerce websites do not process payments at their own. They hire third party payment gateway for this purpose. This is important to ensure that the required payment gateway modules are available to be installed. (WooCommerce 2016, cited 5.4.2016.)

3.3 Design Options

E-commerce platforms offer paid or free themes and designing tools to modify the look and feel of online store. It is important to know that the design being sought can be achieved with those themes and tools. The e-commerce platform with large community, perhaps, best suited for online store. Large community can provide free or low-cost resources for desired design. (WooCommerce 2016, cited 5.4.2016.)

When considering for design options of web-store, responsive design and mobile optimization should be preferred. It is because Google prefers them for search-engine-optimization. (Getler 12.3.2014, cited 31.8.2016.)

3.4 Catalog and Shopping Cart

An online catalog for a store gives the view of the products or the offered services. The e-commerce platform helps the user to select products, compare the features, compare prices, and order the

selective products through web-store. With the availability of catalog and interaction of user with it, the tracking of user on the website becomes easy. (Leverkuhn 12.8.2016, cited 21.8.2016.)

Shopping cart is the most basic element of an online store. It is a specialized content management system that stores product data, renders product data, helps in selling the merchandize, helps in accepting customer payments and shipping information and processing of the payments. (Roggio 11.8.2010, cited 4.9.2016.)

3.5 Security

According to Internet Live Stats (8.9.2016, cited 8.9.2016), total number of website has crossed 1 billionth milestones. Out of those over 1 billion websites, 1% are hacked or compromised. In numbers it will be around 10 million websites which are infected. (Sucuri 18.5.2015, cited 8.9.2016.)

A website is a brand and most probably the contacting medium with customer. If it is compromised, it is similar that the relation with customer is compromised. A small breach in website security may not affect the business or data but it may distrust the customer. A customer's lost trust is business lost. (iPage 14.10.2013, cited 8.9.2016.) Any business, to have competitive advantages, should provide safe environment for e-commerce (Al-Slamy 5.2008, cited 31.8.2016).

3.6 Search Engine Optimization

Search engine optimization or SEO is vital for online business. Search engines ranks websites based upon the information provided in shape of heading, Meta tags, description and the contents. Search engines like Google uses complex algorithm which gives every website a score. Better SEO assures the highest score which is life for any online store to conduct business. (Shopify, cited 21.8.2016.)

Olenski (26.3.2014, cited 8.9.2016) insists on using better organic SEO for multiple reasons. He describes SEO as a cheap marketing technique which provides better visibility in online search. With improved internet speed, access to websites has become easier. Social media activities regarding business provide better SEO. As every business is investing in SEO, even the competitors, you should also do it.

4 E-COMMERCE PLATFORM

User's needs and requirements play a vital role in the selection of an e-commerce platform and there is no perfect solution for that. The user can get maximum knowledge of an e-commerce platform through experience.

E-commerce website is a storefront but virtual, just like a physical storefront, where people go and buy products and services what they need. An e-commerce website is built upon an e-commerce platform. WordPress and PrestaShop are two open source e-commerce platforms powering hundreds of thousands online stores.

4.1 WooCommerce

With 16,620,819 downloads (WooCommerce 2016b, cited 5.8.2016), WooCommerce might be the most popular open source e-commerce plugin. WooCommerce uses WordPress as platform and provides e-commerce activities (WooCommerce 2016c, cited 5.8.2016).

WooCommerce is a forked version of Jigoshop developed by WooThemes, who hired Mike Jolley and James Koster, who were developers at Jigowatt, to work on a fork of Jigoshop (Imel 28.8.2016, cited 5.9.2016). WooCommerce is available as free of cost on internet. There are additional modules and add-ons which can be used to enhance its features, abilities and look. Some of the additional modules and add-ons are available free of cost and others can be bought as a whole or on subscription.

By default, WordPress (see figure 5) has menu on Left side of the screen. After installing WooCommerce, two new menu items WooCommerce and Products will be created in left side menu. Opening any menu item in WordPress admin displays the related contents in the center of the screen starting from top. If there are sub menu in the main menu heading, most probably, it will show up at top of the center part of the admin area. WooCommerce adopts the same WordPress conventional layout. Adopting WordPress layout and navigation style, WooCommerce has become quite simple in layout in admin area and has clean presentation on frontend.

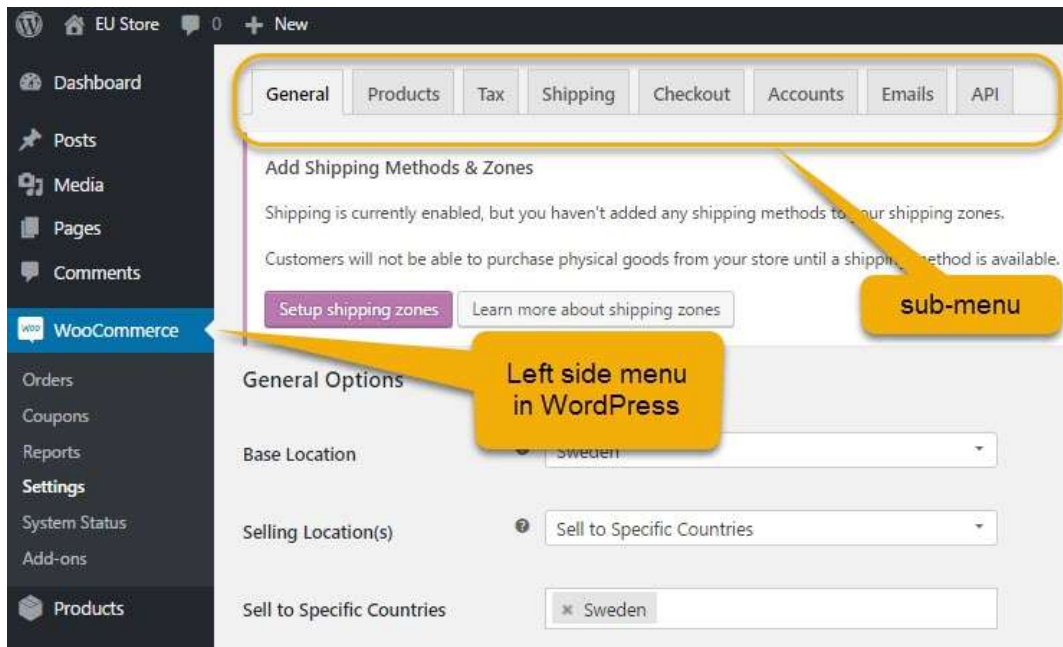


FIGURE 5. *WooCommerce Layout*

WordPress is being used on millions of websites (WooCommerce 2016b, cited 5.8.2016). By adopting WordPress conventional layout, WooCommerce (see figure 5) has made it easy for website owners to create and run web-store. Remembering WooCommerce layout is very easy. Every feature is divided into related menu headings. For example, Settings contain the items which do not, normally, need changes every now and then, and mostly set before doing any other settings in WooCommerce and Products. These are the system-wide changes. Any change in it will affect the whole web-shop. Though, admin do not come to this page very often, still with sub-menu headings it is easy to remember what is hidden under it.

Third party solutions can be adopted and integrated into WooCommerce for the enhancement of its functionality (WooCommerce 2016c, cited 5.4.2016). A search related to WooCommerce for WordPress plugins conducted within WordPress admin area showed 3789 results (see figure 10). These are the third party plugins which one way or other are enhancing and improving WooCommerce functionality and features. These plugins not only help in admin but also improve the user experience on web-store.

WooCommerce advertises its own theme calls Storefront. It is simple, fast loading and handheld device ready theme. By default, it has two types of layout and user can select one at one time. WooCommerce integrates very well with Storefront. (WooCommerce 2017, cited 14.4.2017.) In



reality, WooCommerce can be used with any WordPress theme which is e-commerce ready. Thus designing a web-store is not a problem as long as the user has idea of design. To be familiar with what design of the web-store suites better, the user can google. Storefront design can also be modifying up-to a limit with additional add-ons.

The default options for navigation and search, WooCommerce uses WordPress' default options. By default, in WordPress, user can create as many menus as one wants. WordPress also facilitate breadcrumbs for navigational purposes. There is a search option provided in WordPress. But WordPress also facilitate third party solutions such as Google Search. The user can use Google's option to create own-store-limited search engine and integrate it in its web-store. WooCommerce can use WordPress' own as well as Google's tailor-made search engine.

WooCommerce cataloguing without any additional add-ons is not that impressive. It can only show the item name and picture, its price, the discount if any, text mentioning VAT, rating of product, Sale if any and Add to Cart. The fancy stuff is not integrated like hovering the mouse on picture and there is no pop-out of picture. The specially designed free e-commerce platform has more to show for catalogue like comparison of products e.g. features and price, etc.


There is a built-in shopping cart in WooCommerce (see figure 6). There is no need to buy any third party shopping cart which could be costly. The shopping cart is very simple and easy to use by the buyer. The shopping cart works like add the product in cart, go to cart, apply coupon if eligible and checkout. The web-store owner may ask to register or not during the checkout process. This can be set from admin area.

Cart


| | PRODUCT | PRICE | QUANTITY | TOTAL | |
|---|---|-------------|----------|--------------------------------|---------|
|  |  | Happy Ninja | kr18,00 | <input type="text" value="1"/> | kr18,00 |

Coupon code

You may be interested in...



Ninja Silhouette
★★★★★
kr20,00 *inc. VAT*



Woo Ninja
kr20,00 *inc. VAT*

Cart Totals

| | |
|----------|---------|
| Subtotal | kr18,00 |
| Total | kr18,00 |

FIGURE 6. WooCommerce Cart

An SSL certificate can be installed in WooCommerce (see figure 7). E-commerce website security is very important for couple of reasons. First of all, it involves the monetary transactions. Second, it may that personal information like name, address and financial information like credit card, bank account details are also being stored in web-store database during transaction. To win customer's trust, it is very important to transmit and keep all their information safe. For this purposes, most of the web-stores use SSL (Secure Sockets Layer) certificates. All major browsers show "https://" before website address using SSL certificate. (WooCommerce 2017f, cited 12.4.3017.)



FIGURE 7. Web-store using SSL security

Search engine optimization is like blood in e-commerce. Most of the traffic to small and local web-shops comes through localized search engines. For example, Google.se will prefer search results from Sweden and Google.fi will prefer Finnish search results. It is very important for small online web-stores to do better search engine optimization (SEO) to stay in the business. (Barby 22.4 2015, cited 12.4.2017.)

By default, WooCommerce has no SEO settings but it can be integrated with other SEO plugins available for WordPress. Some famous WordPress plugins like All-in-One SEO Pack and Yoast SEO can be used with WooCommerce. The Owner of web-store do not need to buy these plugins if additional features, other than free, are not needed. Both plugins are very famous to give high ranking among results on Google by using organic keywords. (WooCommerce 29.5.2015, cited 12.4.3017).

4.2 PrestaShop

PrestaShop is an e-commerce platform released in 2007 and available free of cost. It was released under Open Software License as open source. (PrestaShop 2016d, cited 21.8.2016). According to W3Techs (2016, cited 21.8.2016), PrestaShop is being used by 0.6% of all websites. In other words, it is 1.3% of all the websites whose content management system is being known by W3Techs. BuiltWith.com (2016, cited 21.8.2016) has statistics of 363,401,011 websites and 0.4% of all of them uses PrestaShop as their platform.

PrestaShop powers more than 250,000 online stores in 200 countries (PrestaShop 2016a, cited 21.8.2016). It also provides cloud solutions for e-commerce purposes, which has more than 20000 online stores. PrestaShop Cloud is the name of online solution for PrestaShop users. (PrestaShop 29.1.2015, cited 15.2.2017.)

According to PrestaShop 1.6 documentations (PrestaShop 2016b, cited 2016), the administration panel is called back office. Back office is the panel where adding/editing/removing products, handling carriers, building packs, creating vouchers, keeping contact with customers, etc. can be done. So, back office is where the inner working is done. Customers has no interaction with this area as this is admin area. This area is also used to change the look and feel of front office.

Front office (PrestaShop 2016c, cited 21.8.2016) view is how and where the module is displayed within your shop's theme. Users do their interaction only with front office. They can do all the e-commerce activities allowed like going through catalog and shopping, etc.

Back Office (see figure 8) is similar to WordPress layout. The menu is on the left side of the back office. The center is where information related to menu item appears. For example, if Product is clicked from menu, a list of all the products will be shown in the central pane. There is also an option to port the menu to the top of the back office.

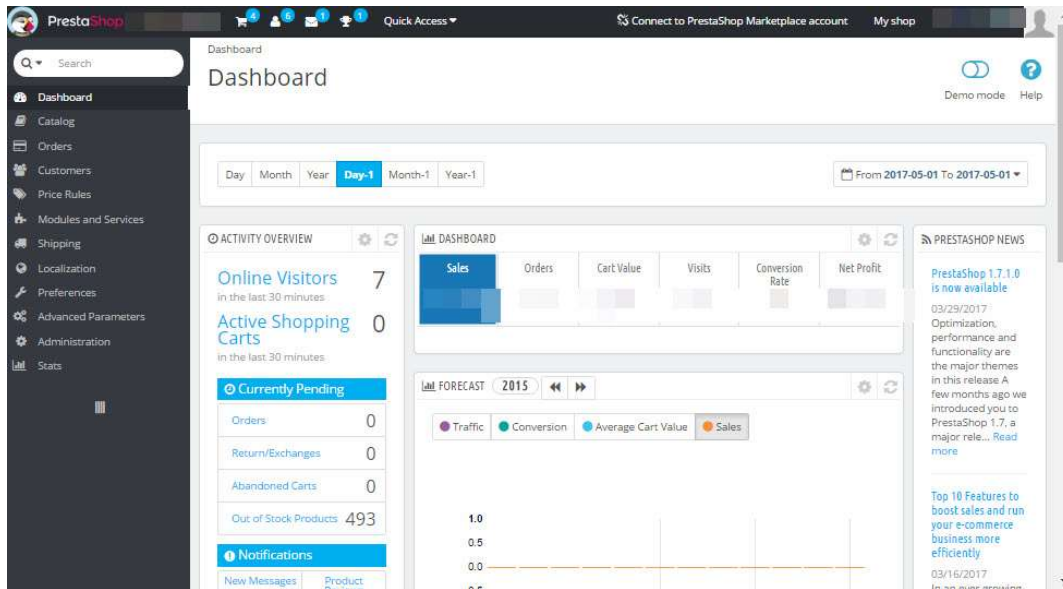


FIGURE 8. PrestaShop Back Office

The back office layout is very simple and interactive. The menu on left hand contains all the necessary information, an admin is needing to conduct back office tasks. Moving cursor over any menu item will open the menu and show sub-items. It is like the features are arranged according to their nature.

Conventional layout and well organized features should make PrestaShop very easy to interact with. But it is not that easy. In fact, it is very difficult for a new user. Only an experienced admin can understand the division of features in menu and keep in memory. Normally, a new user has to interact with back office quite often to understand it properly.

Looking at Catalog menu, most of the features are easily understandable. What is in Products, Categories, Attributes, Suppliers, Tags, Attachments, etc. are easy to guess. But monitoring feature is not that easy. Reading of related documents is very important to understand this feature, though, it does not affect much at front office.

Order menu contains the features regarding orders, its history and current status. Customer menu contains the info about customers and their activities on the front office like their orders, personal info, etc. Shipping is about carriers and other additional charges if any. Localization deals with back office and front office interface languages. It also deals with tax rules.

Preferences menu has quite a set of different features. User needs to go to most of the features to understand it. There are also a couple of things repeating like Orders, Products, Customers, etc. available in main menu as well as in Preference menu. Experience is what needed here to distinguish and understand this all. Advanced Parameters and Administration are totally back office operations. They do not have to do anything with front office directly, thus front office experience is not much effected.

In PrestaShop everything from back office to front office is handled by different modules. Modules, add-ons and plugins are the same things, only name are different. PrestaShop prefers it named module. The module is scripted using PHP language. Modules are able to do many things like management of contents, input and output of data, interacting with other tools and many other functions. Modules add features in back office and front office, and reduce the need to modify the core files of PrestaShop. The modules are configured and placed on different predefined positions. User can change the predefined position of modules and place them on any position. Placing of modules on positions is called hook and replacing or removing them is called unhook. (PrestaShop 2017c, cited 12.4.2017).

Official PrestaShop web-store claims more than 3000 modules for different purposes are available. These modules are for front office features addition and enhancements, SEO, optimization, design, payment, administration, social networking and many other purposes. There are also thousands of modules available from third parties. (PrestaShop 2017a, cited 11.4.2017.)

For front office (see figure 9) outlook and feel, there are 2292 themes available on official PrestaShop web-store. These themes can also be divided among different categories based upon the features like responsive, SEO optimized, menu style, industry base, gender base, language base, etc. (PrestaShop 2017b, cited 11.4.2017.)



Figure 9 PrestaShop Default Front Office

Support to free users for installation, after installation problem, and integration is not provided at all other than the documents available officially. The only assistance free users can get is in the forum. A user posts a problem or question in the forum and it depends upon the other member of the forum to answer it or not. There are only a few members, can be counted on fingertips, active for

the help to others on the forum. The customers who bought services from PrestaShop are getting the support only related to the purchased stuff. This support is also for very limited period. Third party vendors also not very active in providing support. Support is what not much available.

Front office has very interactive layout. There is a slider, a few places for banners, catalog, menu and fancy buttons. The navigation is very easy. A person can go to product page and view the details or can add the product directly to the shopping cart. Search (see figure 10) is very comprehensive inside the front office. Search results can be controlled in back office. Admin can restrict what should be shown in search results for what phrase or word.

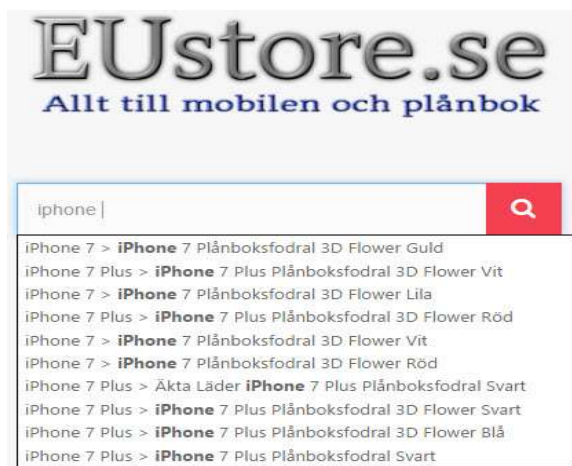


FIGURE 10. Search

PrestaShop's own official theme has very good design. But already present features can be enhanced and also new features can be added by using modules and unofficial themes. There can be any type of layout. All this depends upon the admin.

PrestaShop supports Secure Sockets Layer (SSL) implementation. SSL is very important to gain customer's trust regarding their information. The information can be personal as well as financial. A web store, asking customers to provide personal and financial information, must implement SSL. SSL encrypts all data between customer's browser and server of the website. This encryption prevents prying eyes from stealing important data. Also configuring .htaccess file on server can prevent hacking intrusion. File .htaccess is like a gate which handles and monitors all the traffic to and from the hosting server.

PrestaShop has built-in SEO options which has options like product title, Meta tags, Meta description, and Meta keywords. Also a sitemap can be generated to submit to search engines like Google, Yahoo, Bing and Yandex, etc. Third party SEO modules can be integrated in PrestaShop. PrestaShop also sell official SEO module.

PrestaShop faces two problems: search engine optimization and heavy infrastructure. Search engine optimization is a big problem with PrestaShop. Using any SEO module, it is very difficult to rank high in organic search. Most web-stores use SEO providers, SEO module and Ad services to get high rank in searches. If the store is not very big in resources, PrestaShop is no good. The other problem is heavy infrastructure. Loading a default theme with default settings can create more than one hundred server requests. The files are very heavy and consume lots of server resources. If the hosting is shared and resources are limited, the page load time is huge. Slow page load can send customers away from e-commerce platform.

5 IMPLEMENTATION OF E-COMMERCE PLATFORM

The companies working with Tradera, CDON.com, FYNDIQ or Amazon, to sell their products in Nordic countries and they have their office is in Sweden, have many great benefits if they use Sello.io to manage their e-commerce activities. Sello helps in keeping the stock updated, tracking the orders and a lot more. It also helps if the company is using own e-commerce platform like PrestaShop or WooCommerce.

Companies can add their products to Sello instead of directly adding the products on different e-commerce platforms. After adding products, the vendor has to enable the marketplace where the products should be sold. The products will show up in that market place. When there is any sale, it will be recorded in Sello. The merchant will be notified in the admin panel of Sello as well via email.

There were only two options available to use self-hosted e-commerce platform, either WooCommerce or PrestaShop. The first choice was WooCommerce. Installation of PrestaShop was an alternative. The decision to use WooCommerce was based on many facts.

WordPress provides the biggest blog platform being used today. Using an e-commerce plugin can convert it to an e-commerce platform. WordPress is easy to install, use and maintain. It gets the updates frequently. It is also that all new upgrades in WordPress are compatible to old installations. The admin only need to press update button and the WordPress will be updated to the latest release. The admin does not need to remove the old installation and install the new version.

There are 49,561 plugins, free of cost, to enhance WordPress functionalities and features enlisted on WordPress official website (WordPress 2017a, cited 10.4.2017). Almost 10,000 free themes are listed on wordpress.org (WordPress 2017b, cited 10.4.2017). Any theme can be used to install e-commerce plugin. This means any theme can be used to conduct e-commerce.

WooCommerce uses WordPress as base platform. The flexibility and add-ons for WooCommerce makes it the first choice for any small e-commerce entity. WooCommerce can convert any theme, free or paid, to e-commerce platform. The extensive paperwork, free online support from hundreds of volunteers, great support by WordPress and WooCommerce community, thousands of free add-ons for WooCommerce (WordPress 2017c, cited 11.4.2017), its open source nature

(WooCommerce 2017, cited 11.4.2017), instant response to bug reports, best SEO support, free of cost and frequent incremental and major updates makes it the first choice to be installed.

PrestaShop is put as alternative to WooCommerce. PrestaShop is also an open source (PrestaShop 2016d, cited 21.8.2016) and free of charge e-commerce platform designed only for e-commerce purposes. It does provide blogging feature but that is only an additional and has to be enabled through back office.

PrestaShop has only just more than 3,000 modules listed officially to enhance its features (PrestaShop 2017a, cited 11.4.2017). There are less than 2,400 themes available officially on its website (PrestaShop 2017b, cited 11.4.2017). Contrary to WooCommerce, PrestaShop additional modules and services available officially are not free. These are quite expensive and comes with only three months of support and update. The additional support and updates can be bought for extra money. Comparatively, it is costly.

Sello representative advised the commissioner to use WooCommerce first because of its extensive nature, support, easiness and low on server resources, discussed on email. On the other hand, having experience with WordPress and WooCommerce, the commissioner was interested in to use WooCommerce first. PrestaShop was put on alternative option.

5.1 WooCommerce Implementation

After installation of WordPress, logged in admin panel and plugins menu opened. From there clicked on Add New. On Add New page, WooCommerce was searched. Then WooCommerce, the first search result out of 3789, was installed by clicking on the button Install Now (see figure 11). It installed automatically and the admin had nothing to interfere during the installation process.

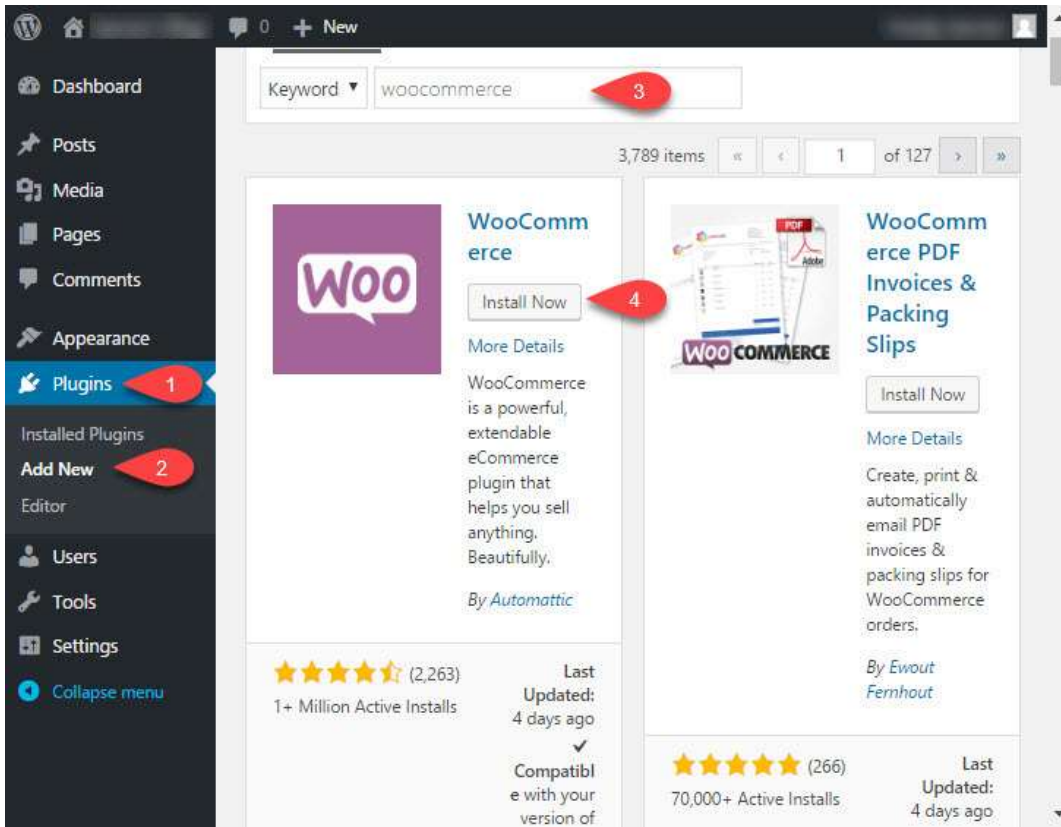


FIGURE 11. WooCommerce installation

After WooCommerce installation, Installed Plugins submenu item was opened. There WooCommerce was activated clicking on Activate button (see figure 12).

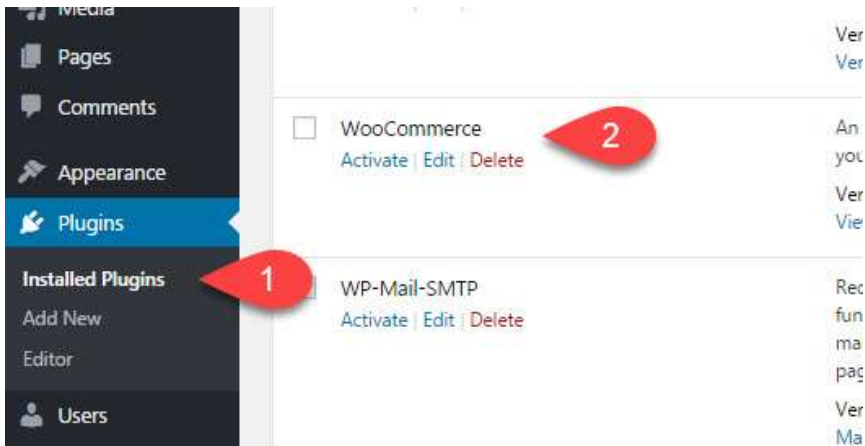


FIGURE 12. WooCommerce Activation

After activation, WooCommerce asked to configure it. The whole process was done step by step. After setting up info (see figure 13) about business, shipping and payment, it was ready to be integrated with Sello.



FIGURE 123. WooCommerce Setup

To integrate WooCommerce and Sello together so that all the stock and related info can be imported to WooCommerce automatically, the final steps were taken. The most important thing was the creation of API key in WooCommerce and its implementation and acceptance by Sello. With the help of API key, Sello would identify the installed WooCommerce client as an authentic client. Then WooCommerce would start receiving all stock info from Sello.

There are two steps process for the integration of WooCommerce with Sello. First step is to generate the API key in WooCommerce. The second step is to submit and create the link, with of those generated API keys in WooCommerce during first step, to Sello.

To create API key in WooCommerce, WooCommerce menu opened and then opened API submenu (see figure 14).

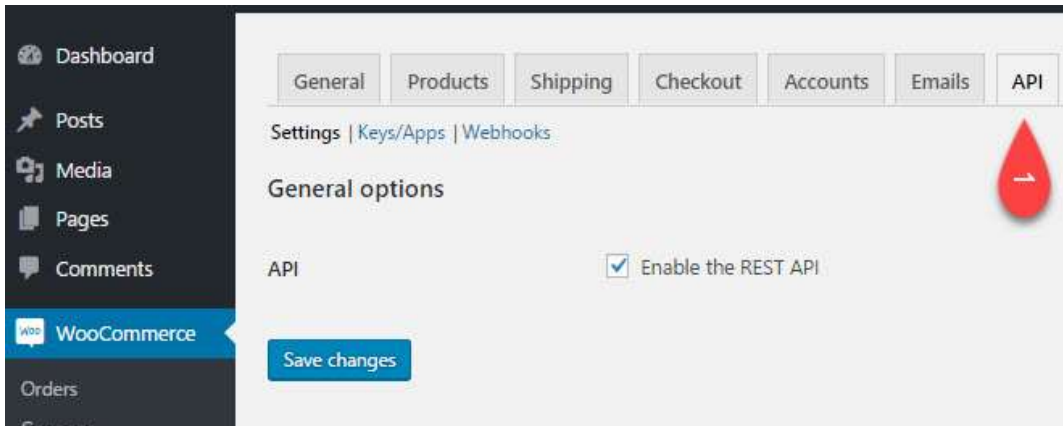


FIGURE 134. API menu in WooCommerce

After API submenu opened, the third level submenu Keys/Apps was clicked, and then Add key clicked (see figure 15).

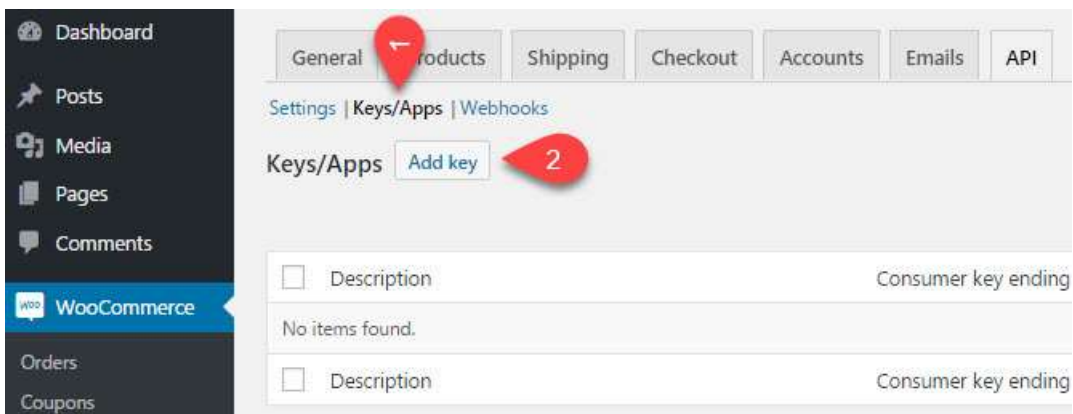


FIGURE 145. Generation of API Key

After pressing Add key, the required fields were filled on the next page. Description is used to identify the key if more than one API keys set is created. User is the person who is holder of the key. Permissions can be Read or Write or both Read/Write. Read is to only retrieve the data from other stock management system, Write is only to modify that data on that separate stock management system, and Read/Write give full control over data retrieval and modification.

After filling Description, User and Permissions, Generate API key button clicked (see figure 16).

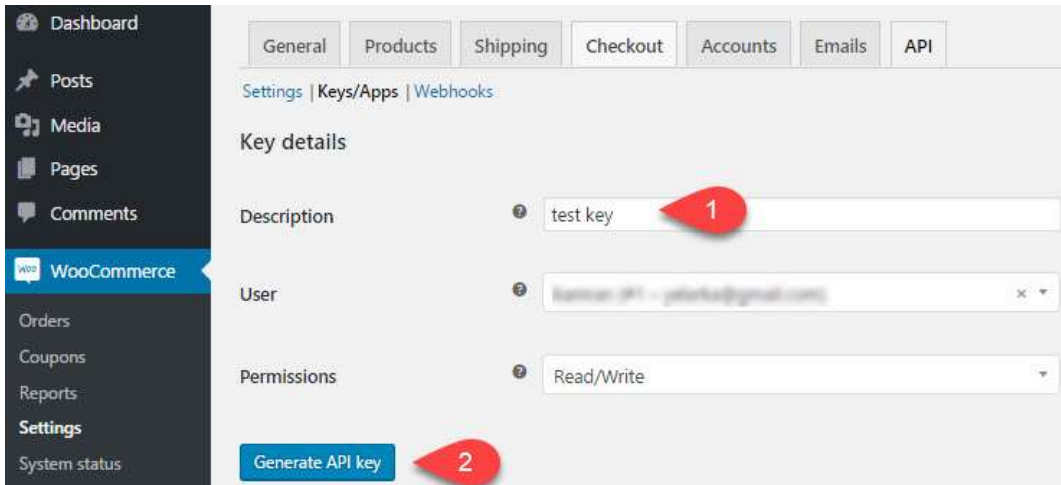


FIGURE 156. Generation of API key

The generated API keys in WooCommerce are very important and should be kept secret unless intended to be used to stock management. Two keys were generated Consumer Key and Consumer Secret. A QR Code and Revoke key was also generated (see figure 17).

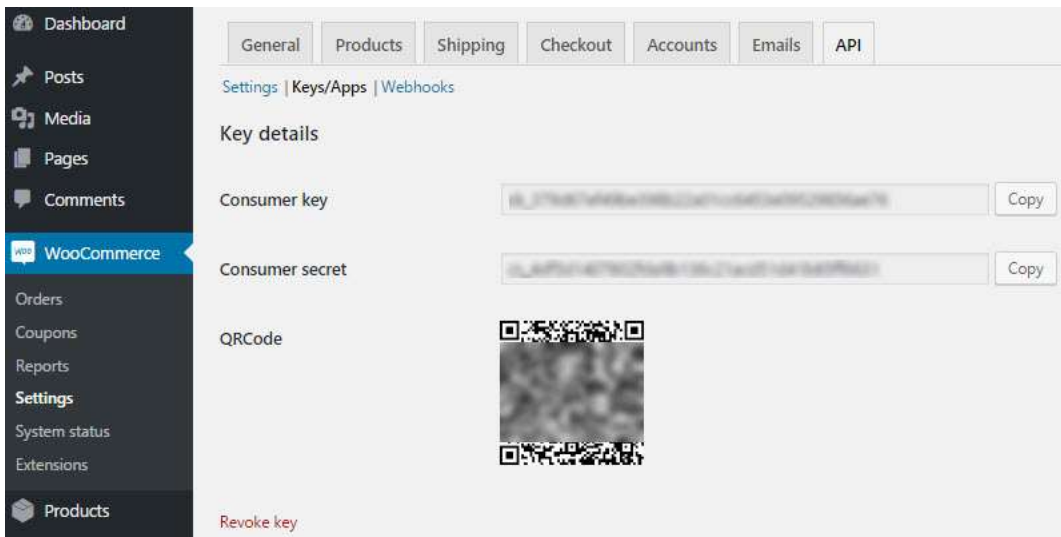


FIGURE 167. Generated API Keys

After the generation of Consumer Key and Consumer Secret, both values had to be fed to Sello integration application so that WooCommerce could work as was intended. Thus, the first part of creation of API key in WooCommerce was done, the second part was to feed those API keys to Sello was ahead.

Before starting integration process, the API keys were copied to safe place. That was to make sure the API keys should be available when needed.

After logged in to Sello, Settings were clicked (see figure 18). Settings contained the links to the text fields where WooCommerce API keys can be fed.

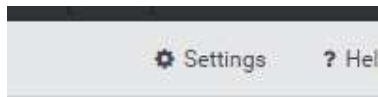


FIGURE 178. Sello Settings

From settings, WooCommerce link was clicked (see figure 19) to connect already created e-commerce store by feeding API keys to Sello.



FIGURE 189. WooCommerce in Sello Webshops

Finally, the API keys were fed and Create Connection button was pressed (see figure 20). Doing so should have created the link between WooCommerce and Sello.

A screenshot of a form titled 'Connect Now!'. It has three input fields: 'URL to your shop', 'Consumer Key:', and 'Consumer Secret:'. Each field contains a blurred URL. Below the fields is a red button with a white plus sign and the text 'CREATE CONNECTION'.

FIGURE 20. API keys in Sello

Something went wrong during the integration of Sello and WooCommerce. We knew that because no connection was created by Sello. Any connection created should have been shown in WooCommerce link in Sello Settings.

After trying a couple of times, it was decided to take help from Sello technical team. An email with details of web shop URL, API keys, and estimated time of failed efforts were sent them. One representative replied within some time. He asked us to give him an admin account on our web shop so that he could check from both sides which one was problematic.

After the testing and examining by Sello technical staff, we were told the problem is on Sello side. The problem was not described to us. Then it was advised to use PrestaShop instead of WooCommerce and WordPress. The whole installation of WordPress was removed from the server because of failed installation of WooCommerce.

5.2 PrestaShop Implementation

After failed integration of WooCommerce with Sello, PrestaShop was the only option left on hand. PrestaShop was downloaded from official online portal and successfully installed according to the direction given on its online documentation portal (Installing PrestaShop 2016, cited 8.4.2017).

After installation, the first thing was considered to be done, changed the name of folder Administration to something else. Changing the name of the folder is the first step to secure the PrestaShop. This makes very difficult for hackers to attack the back office.

To integrate Sello services in PrestaShop, first PrestaShop Webservice should be enabled. This was done by opening Webservice in Advanced Parameters menu (see figure 21).

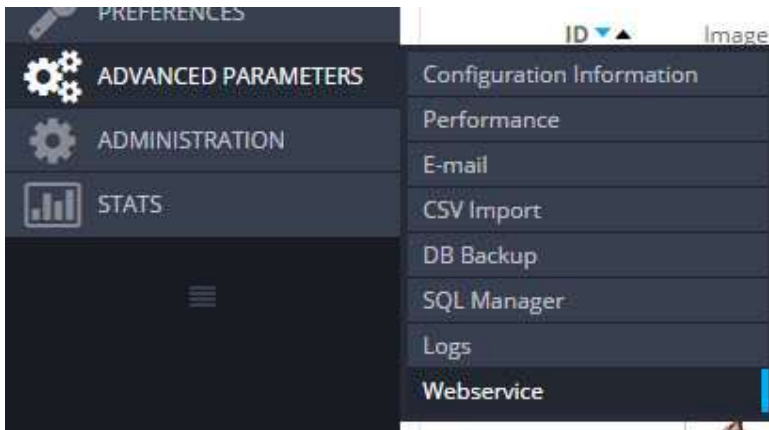


FIGURE 21. Webservice in Advanced Parameters

Webservice is used when third party services are needed to be integrated into PrestaShop. By default, webservice is disabled. Clicking on button Yes and then saving it will activate the webservice (see figure 22).

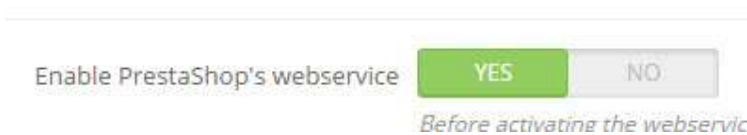


FIGURE 22. Enabling Webservice

After saving to enable webservice, the following message on the back office will confirm the action (see figure 23).



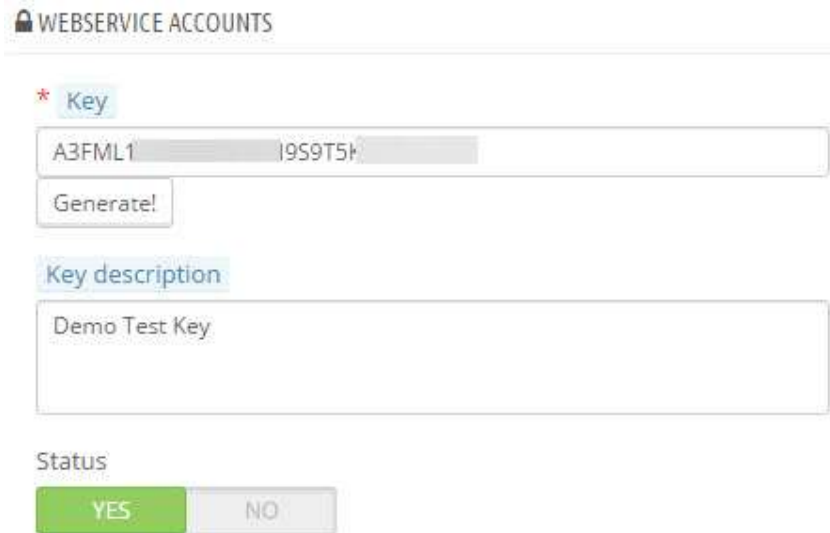
FIGURE 23. Webservice Enabled

After enabling the webservice, the new Webservice Account Key (API key) must be created. The key later would be used in integration. A plus sign was clicked on Webservice page to add the new key (see figure 24).



FIGURE 24. Adding New Webservice Account Key (API Key)

The Webservice page in back office refreshed. On the new page, there was option for the key. The key can be created by ourselves or can be generated by PrestaShop. The key was generated using PrestaShop by clicking on button Generate (see figure 25).



The screenshot shows the 'WEBSERVICE ACCOUNTS' section. Under the 'Key' tab, there is a text input field containing the generated key 'A3FML1' followed by a masked section '19S9T5h'. Below the input field is a 'Generate!' button. Under the 'Key description' tab, there is a text input field containing 'Demo Test Key'. At the bottom, there is a 'Status' section with two buttons: 'YES' (highlighted in green) and 'NO' (disabled).

FIGURE 25. Webservice Account Key Generate

The API key was generated and saved on secure place because the key was going to be used in Sello to integrate Sello into PrestaShop. Before saving the generated key, it was important to activate the services which were going to be used via Sello admin panel (see figure 26). The services selected and then saved.

WEBSERVICE ACCOUNTS

*** Key**
 A3FML1KST8TRLGZFN9S9TSKPP3XCVTIH
 Generate!

Key description
 Demo Test Key

Status
 YES NO

Permissions
 ? Set the resource permissions for this key

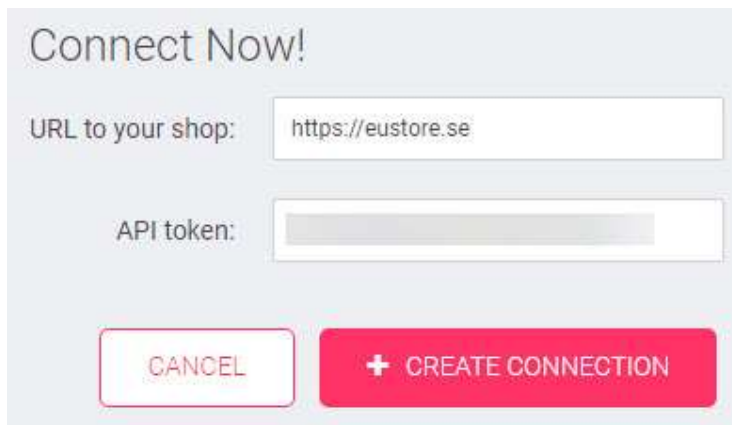
| Resource | All | View (GET) | Modify (PUT) | Add (POST) | Delete (DELETE) | Fast view (HEAD) |
|--------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| addresses | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| carriers | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| cart_rules | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| carts | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| categories | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| combinations | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| configurations | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| contacts | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| content_management_system | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| countries | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| currencies | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| customer_messages | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| customer_threads | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| customers | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| deliveries | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| employees | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| groups | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| guests | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| image_types | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| images | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| languages | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| manufacturers | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| order_carriers | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| order_details | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| order_discounts | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| order_histories | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| order_invoices | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| order_payments | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| order_slip | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| order_states | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| orders | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| price_ranges | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| product_feature_values | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| product_features | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| product_option_values | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| product_options | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| product_suppliers | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| products | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| search | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| shop_groups | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| shop_urls | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| shops | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| specific_price_rules | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| specific_prices | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| states | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| stock_availables | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| stock_movement_reasons | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| stock_movements | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| stocks | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| stores | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| suppliers | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| supply_order_details | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| supply_order_histories | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| supply_order_receipt_histories | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| supply_order_states | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| supply_orders | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| tags | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| tax_rule_groups | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| tax_rules | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| taxes | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| translated_configurations | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| warehouse_product_locations | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| warehouses | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| weight_ranges | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| zones | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Cancel Save

FIGURE 26. Resources Permissions

After the generation of API key and saving the services, the time was to feed those keys in Sello integration application to finalize PrestaShop integration.

After logging into Sello, Settings button was clicked (see figure 17). On the left side below the middle of the page, PrestaShop link was clicked showed inside Webshops (see figure 18). Finally, the API key in API token field and website address in URL field was entered and the button Create Connection was clicked (see figure 27).



Connect Now!

URL to your shop:

API token:

FIGURE 27. PrestaShop API Key in Sello

The connection between PrestaShop and Sello established. The PrestaShop started accepting stock data from Sello automatically. It also updated the stock and other info in Sello whenever the changes happened.

6 DISCUSSION

Installation and configuration of both e-commerce platforms: WooCommerce and PrestaShop were easy. The whole installation process in shape of guide available online on respective channels. The integration of Sello.io services with WooCommerce or PrestaShop is already explained on Sello.io website. The process details are in Swedish. Google Translator was used for translation purposes. Also Sello staff was very helpful when any problem was faced during the installation and integration of WooCommerce and PrestaShop with Sello.

When we see that both WooCommerce and PrestaShop are specially designed platforms for e-commerce, both has huge number of resources, both are free, both are open source and both can be installed on Apache server, why did we choose WooCommerce first to install over PrestaShop for our e-commerce store.

There are a number of reasons for the selection of WooCommerce over PrestaShop. WooCommerce uses WordPress as platform and changes it to e-commerce station. This means, most of the plugins available for WordPress are also available for WooCommerce. For example, SEO plugins All-in-one SEO and Yoast SEO are the best among its kind. Both are available for WooCommerce. This is just one example.

One other reason to go with WooCommerce was my experience with WordPress. I have been using WordPress for more than 7 years for my personal blog. The blog I have used not only for blogging but also for e-commerce activities for couple of years. During those years, I have tested hundreds of themes and plugins. I have done many tweaks over the time to my blog to make it beautiful, fast loading, less resource consuming and most importantly SEO friendly. I have always used shared hosting, which made it clear how less resources are available in shared hosting.

Before the project started, I had seven years of WordPress experience and a couple of years of WooCommerce experience, but on the other hand had no experience of PrestaShop. So, selection of WooCommerce as my first choice was obvious. I advised the commissioner to go along with my decision. Commissioner was agreed.

Commissioner is my brother. He had no prior experience of e-commerce. He has Master in Business Administration degree. He was able to do brick and mortar commerce. Having no experience of online commerce, he asked me to help him.

WooCommerce did not integrate well with Sello platform. We were forced to use PrestaShop, which was totally a new platform for me. I had to learn it before installing on server. I still find it very difficult to navigate through. For example, if I want to add an item, that's easy and I can do. But if I want to manage employee records and permissions or have to manage hooks, it becomes difficult.

From my previous knowledge of WordPress, WooCommerce and the knowledge learned during my work on this project of installation of e-commerce platform, I learned a lot of things. I would like to mention a few from them here.

PrestaShop is resource hungry. If the RAM allocated is less than 1GB and you are using default settings with default theme and default set of plugins, the site will load very slow. In case of eustore.se, the load time was about 8 seconds. Upgraded resources reduced the loading time from 2 to 3 seconds. Because of PrestaShop resource consumptions, there are some hosting providers who deny the hosting for PrestaShop or at least provide no support for it.

Back office in PrestaShop does not have good usability. Though the main menu at first glance is very understandable but after a while it becomes confusing. There are so many features and it is very much possible to forget or missed the features at early stage of use. Also a couple of times same names have been used for two different features, which not only lessens the usability but also sometime creates confusion. I am still helping commissioner to do things done on PrestaShop and I do forget sometime. So, we have created a table for our personal use where we write how we did what for what purpose.

Comparing to PrestaShop, WooCommerce is very straight forward but it does have a few issues. Dividing WooCommerce into two-menu heading is confusing. In fact, Products menu could be adopted under WooCommerce menu and have not created much confusion as it is creating now. For example, Orders, Coupons and Reports are related to Products and they should come under Products heading. WooCommerce menu should only handle system-wide settings like overall Settings of WooCommerce, System Status and Add-ons. By arranging the menu items in the suggested solution will increase the usability of WooCommerce.

Most of the writers write WooCommerce as a platform, though I have different view about it. My view is it is not a platform and just an add-on because it uses WordPress as platform and it only provides the additional features to use WordPress as e-commerce platform. It cannot be used independently. I mean, you cannot install it on your server if WordPress is not installed. To use its features, first need to access WordPress backend and then WooCommerce.

Overall experience with WooCommerce, PrestaShop and Sello.io was great. In fact, this project taught me two new tools: PrestaShop and Sello. I am sure, I can use my gained experience for the future development of my e-commerce knowledge.

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