TECHNICAL REQUIREMENTS DOCUMENT

1.0 GENERALINFORMATION

1.1 Purpose

1.2 Scope

1.3 ProjectReferences

1.4 Acronyms and/orDefinitions

API- Application Programming Interface, a set of protocols or standards for communicating with web based applications

CSS3	Cascading Style Sheets; language used to describe the presentation of a document written in markup language, e.g.,HTML
Gitversioncontrol	Free and open-source version controlsystem
HTML5 of the HTMLstandard	HyperText Markup Language; the fifth and current version
ISP	Internet ServiceProvider
JavaScript websitedevelopment	Programming language used extensively in
jQueryfor Javascript	Javascript library
JSONformat	Data-interchangeformat
MySQL	Open-source database managementsystem
RESTfulAPI	An API that uses a standard set of HTTPrequests

1.0 Points ofContact

1.5.1 Information &Coordination

1.5.2 Roles andResponsibilities

1.5.3 Administrative Support andOversight

CURRENT SYSTEM SUMMARY-

There is currently no single, on-line electronic database containing all information needed for pass-through entities to perform risk assessments and to do ongoing monitoring of static or annualized data related to subrecipient monitoring. Select data are instead housed in certain federal government systems, such as the System for Award Management (SAM) or the Federal Audit Clearinghouse (FAC) with the remainder retained by the individual entities themselves. Certain data expected under the Uniform Guidance to be used for this purpose are as yet unavailable nationally to pass-through entities, including copies of A- 133/Single Audits or federal management decisions. This lack of data and dispersion of data led to research institutions creating data collection documents used with each other at time of subaward issuance or updating. The plethora of forms coupled with most institutions collecting data on a per-subaward basis rather than on a per-entity basis has led to significant administrative burden without commensurate benefit from a risk management perspective

3.0 FUNCTIONAL REQUIREMENTS AND USERIMPACTS

3.0 Summary ofFunctions

4 DataAccessibility
5 Entity ProfileAdministration
6 UserAccounts
7 DataIntegrity
8 SystemSecurity
9 Links to related systems/external compliancedatabases

4.0 PERFORMANCEREQUIREMENTS

4.1 Specific PerformanceRequirements

4.1.1 Timing andCapacity

The system is intended to be available online 24 hours per day, 365 days per year with the exception of scheduled and pre- notified system maintenance downtimes, if needed.

Data will become immediately available for use, except for new profiles, which will be pending in queue for validation by an FDP administrator.

The ECSDWG will ensure that system resources are adequate for timely response times and overall software functionality.

5.0 ADDITIONAL SYSTEMREQUIREMENTS

6.0 Software-

1. Pycharm
2. Mysql
3. Xampp
4. Chrome Browser
5. Python

Features -

Timeline-

1st phase would be focused on straightforward data access for members. The Entity Profile spreadsheets would be integrated into a database. The information in the database would be accessible online in four ways:

- Webview
- System to system, via APIinterface.

2nd phase would improve data entry and ensure all members have control over their own profile. Security is, of course, a concern.

- Password protectedprofiles
- Tracking changes, i.e. date last modified, person who lastmodified

Screen shots of mock up

1. CONCLUSION

In analyzing requirements of e-commerce websites for SMEs, the key elements of e-commerce business model must be resolved to significantly support the business success. This can be materialized at the early stage of requirement analysis, by designing an appropriate sequence of activities.Afteridentifyingbusinessopportunitiesthatcanbeworkedoutorcaughtby SMEs,the activities are: Resolving the market opportunities, competitive environment and advantag**e,** then formulating the business objectives, resolving value proposition, revenue model and marketing strategy, as well as designing the organizations and business rules. After these have been formulated,majorfeaturesofthewebsitecanbedesignedaccordinglywhichcanberef erencedin the next developmentactivities.

The opportunities that can be worked out by SMEs to start e-commerce business include opportunities that lead to pure online business as well as enhancing of off-line (traditional) business currently running by SMEs. The proposed method can be adopted in analyzing requirementsofe-commercewebsiteforresolvingbothtypesofopportunitiesasdiscussedinthe casestudies.

Future works: Our proposed method is mainly applicable for developing new e-commerce websites for SMEs. For SMEs that already run e-commerce systems, a new approach will be needed, where the legacy systems should be used as the inputs of the requirements elicitation. A model of IS development that uses the artifacts of the existing systems has been proposed in.

RequirementAnalysisofWebsiteofe-Distributor

(1) Problems that rise up theopportunity:

(2) Formulations of market opportunity, competitive environment andadvantage:

The following is the excerpts of the activities.

(a) Surveying and analyzing similar e-commercewebsites:
Fortunately, we have not found any website associating with after market spare parts business in Indonesia.Wecanonlyfindwebsitesthatoffermembershipswhereeachmembercan sellorbuy products from thewebsite.

(b) Surveying the spare partretailers:
We conduct survey to sample of retailers, five respondents, in Padang – Sumatera in October – November2012byhavingdiscussionsrelatedtowheretheyorderspareparts,criteriai nordering spare parts, their problems, and expectations. The excerpts of the results are as follows: (1) They orderpartstodistributorsinMedanandBandung;(2)Thetopcriteriainselectingpartsa rebrand and price (by knowing the brand, they can predict the parts quality); (3) They build good relationship with distributors by routine communications and pay the bills on time; (4) Top problems they encountered are: (i) the salesmen do not always show up every month such that they must order parts by phone, which very often hard to connect; (ii) the salesmen come in the “wrong time” (then the retailer is busy) such that the retailers make orders in a hurry without goodplan;(iii)theretailershavenocluewhethertheirorderedpartsare“instock”;(iv)so metime thereisdiscrepancybetweentheorderedwithgoodsshipped;(5)Theyexpectthatthe distributors canbereachedorcontactedanytimeandtheyareverywelcomeifthepartscanbeorder edonline via the Internet as long as they are trained in using thewebsite.

The following are the formulations of the three key elements, which are based on survey results:

- *Market Opportunity*: The retailers of after market spare parts who need to order parts at any timefromanywhereinordertomeetthedemandof motorcyclesridersinIndonesia.
- *Competitive Environment*: Fortunately, currently there is no e-commerce B2B system specializinginaftermarketspareparts.Bygoingfirst,DistributorXcanlead.

- *Competitive Advantage*: Distributor X has been successful in selling after market spare parts toretailers.ItalsohaslotsofloyalretailersspreadinginSumateraandJava.Therefore,when itgoesonlineitcanstartwiththeexistingcustomers(whowillbehappytogetbetterservices by using the website). It will also need to spend less cost in acquiring new customers (no needtovisitonebyone) asitcanadvertisethepartsintheInternetaswell.

(3) Business objective, success criteria andrisks:

Business objective and Success Criteria: BO-1: Reduce operating cost of selling spare parts by 20% with in one year which can be achieved by replacingmanual with online order transactions; BO-2:Increasegrossrevenueby15%withinoneyearwhichcanbeachievedbyacquiringmore retailers and increasing spare parts sales; SC-1: Have 70% of retailers who currently order spare partsmanuallyusethewebsitetoordersparepartswithinoneyear;SC-2:Achieveanincreasein the average rating on the quarterly retailers' satisfaction survey of 0.5 within 3 monthsfollowing website launching and 1.0 within 12 months following thelaunching.

***Business Risks*: Some examples of the risks are as follows: Ri-1: Retailers refuse to order online due to lack of skill in using the Internet; Ri-2: New competitors will emerge with better prices and services.**

(4.a) Formulations of value proposition, revenue model, marketing strategy:

Based on the results of the previous steps, the following are the formulations of the 3 other key elements:

- *Value Proposition*: For retailers: Efficiencies in searching and purchasing spare parts, also obtaining better services through simple transactionprocedures.
- For distributors: Extending market with less cost, better transaction management (reducing human error in recording parts ordered) and real time salesreports.
- *RevenueModel*:Thereisnomodificationoftherevenuemodel.Therevenuewillcomefrom saletransactions.
- *Marketing Strategy*: Distributor X will train the current off-line customers (retailers) to use thewebsitetoview,searchproductsaswellastoconducttransactionsonline.Forexpanding market, the salesmen will visit new retailers and introduce the website and its benefits. The website will be also registered in major searchengines.

(4.b) SME Organizations:

At the beginning, the existing organization structure (Sales, Purchasing, Marketing, Inventory division) should function as it was except that now the staff should handle transaction electronically. However, there is a need to add one division, which is IT division that is responsible to maintain the website, hardware and the network used by all of the staff.

(5) BusinessRules*:*

Policy: Except that now parts order can be conducted online (by member retailers), basically thereisnoothermajorpolicychanges.TheminimumorderisstillIDR500.000andpayment can be with cash as well as via bank transfer. Later on, if the system has been functioned well, an electronicpaymentsystemmodulewillbeaddedtoautomatethepartspurchasing.

Major Rules: Basically there is no change to the existing rules. However, some additional rules are needed, for instance: BR-1: Sales person should make the spare parts order directly on to the website while visiting the retailers. literatures,suchastheonedepictedin[1].Ourproposedmethodcanbeenhancedbyadoptingthe modelpresentedin[1]andotherrelatedresearchresultssuchthatitwillbesuitableforSMEs

(6) Major Features of theWebsite:

The website major features formulated based on the previous activity results are depicted in Table

No	User	Major Features
FE-1	Retailers	Browse and search spare parts based on specific conditions,
FE-2	Retailers	Contact the distributor (via email and chat)
FE-3	Retailers	Order spare parts and track order statuses
FE-4	Retailers	Post comments and reviews for specific parts or parts producers
FE-5	Retailers	Get personalized email and web pages
FE-6	Sale Reps	Verify order payment, manage order statuses and parts delivery
FE-7	Sale Reps	Produce sales reports for requested period
FE-8	Purchasing	Generate order spare parts to supplier, validate incoming spare parts and return unwanted spare parts
FE-9	Purchasing	Produce purchasing reports for requested period
FE-10	Inventory	Manage incoming and outgoing spare parts
FE-11	Inventory	Produce stock reports for requested period
FE-12	Marketing	Produce visitor hits reports (for each spare parts and page) and comments reports
FE-13	Marketing	Analyze data using data mining techniques to obtain useful patterns that can be used in marketing, via email/messaging and personalized web content
FE-14	Marketing	Post ads to search engine and social networks
FE-15	Owner	Produce analytical reports of sales, order, stock and visitor hits

Hardware Configuration –

RAM

HDD

OS

Processor