

Feasibility Evidence Description (FED)

Women at Work Website Redesign

Team No: 14

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Version History

Date	Author	Version	Changes made	Rationale
09/27/2014	PM	1.0	<ul style="list-style-type: none">Identified potential risks	<ul style="list-style-type: none">Initial list of risks and corresponding mitigation plan
10/03/2014	RK	1.1	<ul style="list-style-type: none">Added new risks	<ul style="list-style-type: none">New risks identified after the two win-win sessions
10/11/2014	RK	2.0	<ul style="list-style-type: none">Updated remaining sections of the FED document except for Section 6	<ul style="list-style-type: none">Updated for FCR ARB

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A.1. Introduction

A.1.1 Purpose of the FED Document

The Feasibility Evidence Description (FED) document provides accurate analysis of the Women At Work Website Redesign project. It proves that the proposed project is deliverable within the various constraints by identifying business cases, potential risks, costs and benefits and possible problems that our software development team might face in the development life-cycle. It demonstrates a workable business case for the system being developed and also provides the feasible mitigation plans for all risks. It also analyzes the feasibility of all NDI/NCS alternatives that may be suitable for this project. The completion of this document aids the success-critical stakeholders in deciding whether or not to proceed with the project into the next phase of development.

A.1.2 Status of the FED Document

This is the version 2.0 of Feasibility Evidence Description. In this version, we have made the following changes:

- Updated section 1.2, the status of the FED Document is updated to show the changes we made about the latest version of this document
- Updated section 3, added some risks identified after the two win-win sessions.
- Updated sections 2,4 & 5 for Foundation Commitment Review (FCR) ARB.

A.2. Process Feasibility

The following table provides our rational for selecting appropriate NDI/NCS Model.

Table 1: Rationales for Selecting NDI/NCS Model

Criteria	Importance	Project Status	Rationales
30 % of NDI/NCS features	High	High	The project is highly dependent on the use of NDI/NCS and most of the tools utilized in this project are NDI/NCS
Single NDI/NCS	High	Low	The development team requires the use of atleast 2-3 NDI to deliver the project
Unique/ inflexible business process	Medium	Low	The website layout and design uses the basic version of the WordPress template
Need control over upgrade / maintenance	Medium	Low	Bi-weekly maintainence of the website will be performed by the clients
Rapid deployment	Medium	Low	Clients have a website up and running but they require an urgent upgrade to the website
Critical on compatibility	High	High	The new system should be compatible with the original website
Internet connection independence	Very Low	Low	The website is currently running on the internet
Need high level of services / performance	Low	Low	The website does not have any high performance requirements
Need high security	Medium	Low	The website is fairly secured by using Neon CRM
Asynchronous communication	High	High	Website runs on HTTP protocol that provides asynchronous communication
Be accessed from anywhere	High	High	The website is accessible worldwide

Critical on mass schedule constraints	High	High	The project should be completed with the given time constraints
Lack of personnel capability	High	Medium	The team has decent knowledge of a couple of NDI's and can easily learn WordPress and Neon CRM
Require little upfront costs	Very High	High	Our clients being a non-profit organization, cost is a critical issue and currently the new system has no upfront costs
Require low total cost of ownership	High	Low	The cost for maintenance and other fees of this website's ownership is relatively low comparing with other big websites
Not-so-powerful local machines	Low	Medium	The website need not run on high-end machines. It gives the required performance with medium size machines as long as they are web browser supported

A.3. Risk Assessment

Table 2: Risk Assessment

Risks	Risk Exposure			Risk Mitigations
	Potential Magnitude	Probability Loss	Risk Exposure	
As the current Neon CRM API is in its beta version, the future versions of API may not be backward compatible	8	5	40	Switch to the manual entry in Neon until source code is updated as per the new API
As we are working on production system, there might be data corruption and website might experience downtime	6	6	36	Create a test development system for Neon CRM and website by making copies.
Since on-site checkin system uses MySQL that is hosted on client's own server, the checkin system might crash due to server failure	4	2	8	Perform a manual checkin by entering data into spreadsheets and later upload the data into the MySQL database once the server is up
After demonstrating the prototype, the client's requirements might change	2	5	10	Incrementally update the prototype and design until client's requirements are met.
WAW server personnel may not have enough experience to maintain the newly installed MySQL	4	8	32	Provide necessary training to the server personnel

A.4. NDI/NCS Feasibility Analysis

A.4.1 Assessment Approach

The most important requirement of the Women At Work Website Redesign project is to automate their business processes like registration and feedback and improve their existing onsite checkin module. Currently they have deployed Neon CRM for managing their client data. Registration and feedback are manual processes. In order to automate registration and feedback process, the team must make use of the Neon CRM API which is currently available in beta version. For onsite checkin module, there is a need to integrate a database management system that would allow users to checkin effectively and efficiently. Therefore, we are going to use two evaluation criteria mentioned in section 4.2.1 to evaluate the NDI alternatives using "Evaluation Results Screen Matrix".

The constraints:

- All the NDIs should be compatible to GoDaddy, webhost that the client is currently using.
- All the NDIs should be compatible with WordPress, Content Management System the client is currently using.
- We need to use low-cost or free NDI/NCS products since the client is a non-profit organization.

Current environment:

- Website is currently hosted with GoDaddy.
- Workstations are equipped with Windows XP.
- MS Access database for onsite checkin.
- The website is currently using WordPress templates.

A.4.2 Assessment Results

A.4.2.1 NDI/NCS Candidate Components (Combinations)

The following table lists the NDI alternatives or options to consider when implementing the Website Redesign project for Women At Work.

Table 3: NDI/NCS Products Listing

NDI/NCS Products	Purposes
Neon CRM	Customer Relationship Management (CRM) system

Neon CRM API	Connecting to the Neon CRM
MySQL	Data Management System
MS Access	
PHPMyAdmin	Navigator for MySQL database
GoDaddy	Website Hosting Platform
WordPress	Content Management System
ShareThis	Social Media plugin for Wordpress
Google Drive	File Management System
DropBox	

.4.2.2 Evaluation Criteria

To better evaluate our selected NDIs, all team members and our client have all agreed to the following two evaluation criteria during our discussion.

Table 4: Evaluation Criteria – NDI /NCS Attributes

No	Evaluation Criteria – NDI/NCS attributes	Weight
1	Inter-Component Compatibility	6
2	Product Performance	9
3	Functionality	7
4	Documentation understandability	5
5	Flexibility	6
6	Maturity of Product	4
7	Vendor Support	5
8	Security	4
9	Ease of Use	10
10	Training Tutorial and Video	8
11	Ease of Installation/Upgrade	6
12	Ease of maintain	6
13	Vendor viability/stability	4
14	Compatibility with GoDaddy	11
15	Ease of Integration with third-party software	9
	Total	100

Table 5: Evaluation Criteria - NDI/NCS features

No.	NDI/NCS Features/ sub features	Weight
1	Users can register for the client from website	26
2	User can provide online feedback about their current situation to the clients at will and privately	15
3	Users can purchase tickets on the website	4
4	Users can checkin onsite for the services they want to utilize at the WAW center	18
5	IT personnel can generate reports	10
6	WAW board members can upload and share files on a common platform	12
7	Users can like facebook page from clients website	7
8	WAW staff can publish blogs	8
	Total	100

.4.2.3 Evaluation Results Screen Matrix

We did not evaluate five NDIs that we listed in Section 4.2.1 namely WordPress, GoDaddy, Neon CRM, Neon CRM API and PHPMyAdmin. WordPress, GoDaddy and Neon CRM are not evaluated for following reasons :

- These NDI's are currently utilized by the clients and therefore, they are already familiar with what they are using. By changing the hosting platform, clients might have to shell out more money which they are clearly unwilling to as they are non-profit organization.
- There is no need to change these solutions since these NDI products are already very mature and provide sufficient functionalities that meets the clients requirements.

Functionalities provided by ShareThis plugin is enough to statisfy client's requirement for social media integration. As the team has decided to use Neon CRM, Neon CRM API is the only way to automate the client's business processes. Since this API comes as a php library, there is no better option than to use PHPMyAdmin as a navigator for the MySQL database to provide seamless integration and compatibility with the Neon CRM API.

Table 6: Evaluation Results Screen Matrix

No	W	MySQL				AVG	Total	MS Access				AVG	Total
		R1	R2	R3	R4			R1	R2	R3	R4		
1	6	10	9	9	10	9.5	57	8	8	7	8	7.75	46.5
2	9	9	9	8	9	8.75	78.8	9	8	6	8	7.75	69.75
3	7	9	10	8	9	9	63	8	8	8	9	8.25	57.75
4	5	10	9	10	9	9.5	47.5	8	8	7	7	7.5	37.5
5	6	8	7	9	10	8.5	51	7	7	8	8	7.5	45
6	4	9	6	10	8	8.25	33	9	9	8	8	8.5	34
7	5	8	9	9	9	8.75	43.8	6	5	7	8	6.5	32.5
8	4	9	9	9	9	9	36	7	6	5	7	6.25	25
9	10	10	10	10	10	10	40	10	9	8	7	8.5	85
10	8	9	8	9	10	9	72	8	7	8	7	7.5	60
11	6	9	10	10	10	9.75	58.5	7	9	8	7	7.75	46.5
12	6	9	9	8	8	8.5	51	7	8	9	10	8.5	51
13	4	10	7	9	9	8.75	35	8	6	8	9	7.75	31
14	11	9	10	8	9	9	99	7	6	5	7	6.25	68.75
15	9	10	10	9	10	9.75	87.8	8	7	8	9	8	72
Total	100						853.4						762.4

No	W	MySQL				AVG	Total	MS Access				AVG	Total
		R1	R2	R3	R4			R1	R2	R3	R4		
1	26	0	0	0	0	0	0	0	0	0	0	0	0
2	15	0	0	0	0	0	0	0	0	0	0	0	0
3	4	0	0	0	0	0	0	0	0	0	0	0	0
4	18	10	10	10	10	10	180	7	6	8	7	7	126
5	10	10	10	10	10	10	100	8	9	9	8	8.5	85
6	12	0	0	0	0	0	0	0	0	0	0	0	0
7	7	0	0	0	0	0	0	0	0	0	0	0	0
8	8	0	0	0	0	0	0	0	0	0	0	0	0
Total	100						280						211

No	W	Google Drive				AVG	Total	DropBox				AVG	Total
		R1	R2	R3	R4			R1	R2	R3	R4		
1	6	9	10	10	9	9.5	57	9	9	10	9	9.25	55.5
2	9	10	10	10	10	10	90	9	9	9	9	9	81
3	7	10	10	10	10	10	70	10	9	9	9	9.25	64.8
4	5	9	9	9	10	9.25	46.3	9	10	9	9	9.25	46.3
5	6	10	10	9	10	9.75	58.5	9	9	9	10	9.25	55.5
6	4	10	9	9	10	9.5	38	9	10	9	9	9.25	37
7	5	10	10	10	10	10	50	10	9	10	9	9.5	47.5
8	4	10	10	10	10	10	40	9	10	10	10	9.75	39
9	10	9	10	9	10	9.5	95	9	9	10	10	9.5	95
10	8	9	9	9	9	9	72	10	9	9	10	9.5	76
11	6	10	10	10	10	10	60	9	10	9	10	9.5	57
12	6	10	10	9	9	9.5	57	9	9	9	9	9	54
13	4	10	10	10	10	10	40	10	9	10	9	9.5	38
14	11	10	9	10	10	9.75	107.3	9	10	9	9	9.25	101.8
15	9	10	10	9	10	9.75	87.8	10	10	9	9	9.5	85.5
Total	100						968.9						933.9

No	W	Google Drive				AVG	Total	DropBox				AVG	Total
		R1	R2	R3	R4			R1	R2	R3	R4		
1	26	0	0	0	0	0	0	0	0	0	0	0	0
2	15	0	0	0	0	0	0	0	0	0	0	0	0
3	4	0	0	0	0	0	0	0	0	0	0	0	0
4	18	0	0	0	0	0	0	0	0	0	0	0	0
5	10	0	0	0	0	0	0	0	0	0	0	0	0
6	12	10	10	10	10	10	120	9	10	10	9	9.5	114
7	7	0	0	0	0	0	0	0	0	0	0	0	0
8	8	0	0	0	0	0	0	0	0	0	0	0	0
Total	100						120						114

A.4.3 Feasibility Evidence

.4.3.1 Level of Service Feasibility

Table 7: Level of Service Satisfiability Evidence

Level of Service Win Condition	Rationale
LOS-1: The system shall be down at most 2 hours a month.	By analyzing the feasibility of Wordpress and Neon CRM, we found that their respective Service Level Agreement (SLA) guarantee an uptime of 99.9% i.e. max downtime of 45 min/month which satisfies WC_3201

Since the selected NDI/NCS's performance can satisfy the level of service. We are not including Level of Service Implementation Strategy in this document.

.4.3.2 Capability Feasibility

Table 8: Capability Feasibility Evidence

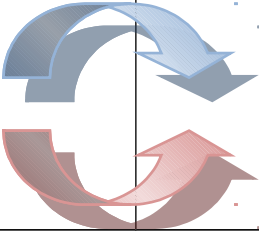
Capability Requirement	Product Satisfaction
CR-1: Online Registration	Software/Technology used: WordPress, Neon CRM
	Feasibility Evidence: By prototyping the online registration process with the help of Neon CRM API, we came to the conclusion that making registration process online is feasible.
	Referred use case diagram: UC1 - Registration Capability
CR-2: Online Feedback	Software/Technology used: Wordpress, Neon CRM
	Feasibility Evidence: By prototyping the capability of adding additional fields in the existing tables, we concluded that we can store and update the feedback for every customer.

	Referred use case diagram: UC2 – Feedback Capability
CR-3: Onsite Checkin	Software/Technology used: MySQL
	Feasibility Evidence: Prior experience and confidence of the team with MySQL database ensured the feasibility to store checkin data in MySQL database. Moreover, storing data in the MySQL database will further aid in report generation process.
	Referred use case diagram: UC3 – Onsite user Checkin
CR-4: Report Generation	Software/Technology used: MySQL
	Feasibility Evidence: Querying capability of MySQL helps to retrieve useful data that will aid to create accurate reports required by the client.
	Referred use case diagram: UC6 – Report generation
CR-5: Enable Blogging	Software/Technology used: WordPress
	Feasibility Evidence: Blogging capability inherently comes with WordPress.
	Referred use case diagram:
CR-6: Social Media Integration	Software/Technology used: ShareThis
	Feasibility Evidence: This NDI can be installed as a wordpress plugin and thus can be easily used and maintain.
	Referred use case diagram:
CR-7: Private Data Management Portal	Software/Technology used: Google Drive
	Feasibility Evidence: Google Drive is a well known platform for secure file sharing that satisfies the client's requirements.
	Referred use case diagram: UC4 – Secure Document Management Upload Process & UC5 - Secure Document Management View Process

.4.3.3 Evolutionary Feasibility

There is no evolutionary requirement specified in WinWin Agreements.

A.5. Business Case Analysis

Assumptions: - Users are willing to use online registration form - Users are willing to give feedback			
Stakeholders (Who is accountable for the initiatives)	Initiatives (What to do to realize benefits)	Value Propositions (Benefits i.e Why)	Beneficiaries (Who derives value)
<ul style="list-style-type: none"> - Developers - Cecilia (Maintainer/DBA) 	<ul style="list-style-type: none"> - Develop/System re-design. - Training of staff/clients/users 	<ul style="list-style-type: none"> - Improved data management. - Improved usability for clients. - Easier/Improved report generation. 	<ul style="list-style-type: none"> - Clients of WAW - Board members - Cecilia (Maintainer/DBA)
Cost <ul style="list-style-type: none"> - Website Upgrade Costs - Website Maintenance Costs - Cost for training WAW staff with the new system 		Benefits <p><i>Increased</i></p> <ul style="list-style-type: none"> - Number of website visitors - Visitors' time spent on the website - Insight about customer's progress for job search - Number of users registered with Women At Work organization. - Amount of funders' donations <p><i>Decreased</i></p> <ul style="list-style-type: none"> - Waiting time for users during onsite checkin - Marketing time due to the social media integration. 	

A.5.1 Market Trend and Product Line Analysis

There is no concept or definition of market trend and product line for our system.

A.5.2 Cost Analysis

.5.2.1 Personnel Costs

Table 9: Personnel Costs

Activities	Time Spent (Hours)
Exploration Phase, Valuation Phase and Foundation Phase: (CS577A, 8 weeks)	
Activities involving the stakeholder: Client – Meeting via email, phone, and other channels [2 hrs/week * 8 weeks * 1 person]	16
Attended 2 WinWin Negotiations [2hrs/time * 2 times * 8 person]	32
FCR ARB [2hr * 8 person]	16
Prototype review by emails [1hr/time* 2 times *4 person]	8
Total	70

.5.2.2 Hardware and Software Costs

Table 10: Hardware and Software Costs

Type	Cost	Rationale
Hardware – Web Hosting	\$0	The clients are willing to continue with their GoDaddy web hosting
Software – Customer Relationship Management	\$0	The clients are willing to continue with their existing Neon CRM for managing user data
Software – Content Management System	\$0	The clients are willing to continue with WordPress for managing their website
Software – File Sharing System	\$0	Google Drive is available for free
Software – Database Management System	\$0	MySQL licenses are free of cost
Total	\$0	

A.5.3 Benefit Analysis

Table 11: Benefits of xxx System

Current activities & resources used	% Reduce	Time Saved (Hours/Year)
Automation of Registration Process: Currently clients take paper-based registration		
WAW staff (20 min/time and 1000 times/year)	75%	250
Automation of Feedback Process: Currently clients take feedback by telephonic conversation		
WAW staff (15 min/time and 1500 times/year)	80%	300
Onsite Checkin Process on multiple machines: Currently clients uses only one machine		
Users (3 min/time and 3500 times/year)	80%	140
Total		690

A.5.4 ROI Analysis

The project is been undertaken for a non-profit organization under the constraint of zero budget for development and operations. Since the project does not incur any hardware or software cost , there will be no investment and thus the team has not performed any ROI analysis.

A.6. Conclusion and Recommendations