



Sutter Health

Research, Development & Dissemination



Exhibit A - Statement of Work

MS-SHARE ENHANCEMENTS

In accordance with the Master Products, Software Services Agreement executed between Sutter Health and Netwoven Inc. on May 11, 2018, Sutter Bay Hospitals, an authorized Facility of Customer, agrees to purchase from Supplier and Supplier agrees to sell to Sutter Bay Hospitals the following Services:

1. Background & Project Overview

The MS-Share clinic application consists of several screens and components as described in the Specifications created by Sutter Health. Netwoven previously implemented the User Interface component of the application (using Angular 4 Single Page Application framework and the d3.js charting library) and a few APIs (using MuleSoft and Postgres Database) as described in the respective specifications. This proposal addresses the effort and cost involved in making enhancements to the existing MS-Share implementation identified by Sutter Health during pilot use of the application.

2. Proposal Description

The MS-Share enhancements within the scope of this proposal will support the functionality shown below

Fix Performance Issues	<ul style="list-style-type: none"> Spinning wait timer should not freeze during API calls. Should either continue spinning if API call is in progress, disappear if the API call times out, or disappear and show an error message if there was an error with the API call. Eliminate duplicate API calls by using cached data within the same session. There must be a user workaround to refresh the data within the same session.
Revise Treatment Panel	<ul style="list-style-type: none"> Make the treatment panel bigger and easier to navigate for the purpose of understanding treatment history of one or multiple medications. Participate in design discussions and finalization of mockups
Add Order Symbol Display Logic	<ul style="list-style-type: none"> If there are multiple orders for the same procedure and there is at least one completed order X days after a null order, only show the completed orders. Otherwise, if none of the orders are completed or if they are not within S days of one another, show all.
Edit Lab Configuration file	<ul style="list-style-type: none"> Add a list of labs to the “Labs” configuration file
Edit Lab Configuration file	<ul style="list-style-type: none"> Remove a list of medications from the “Other Meds” configuration file.
Infusion Medications Display Logic	<ul style="list-style-type: none"> Determine if a medication is an infusion med based on the API response In data layer 2, use a field from the API response as the “End”. If data field doesn’t exist, use a list to link medication names to effective duration. Use effective duration as the “End”
Change medication display logic	<ul style="list-style-type: none"> Group medications by generic name regardless of generic/brand status, strength/dosage, or form. If medications of different generic/brand status, strength/dosage, or form overlap, there must be a visual differentiation. In data layer 1, display the medicationOrders.medication.generic_name from the API response.

	<ul style="list-style-type: none"> • In data layer 2, display the medicationOrders.medication.name from the API response.
Rename “Other Meds”	<ul style="list-style-type: none"> • Rename “Other Meds” category in the left nav bar to a text (to be finalized later)

Netwoven will provide the following services to the project.

- Development
 - Design and implement the above enhancements and integrate them into the current implementation of MS-Share application.
 - Integrate with Maestro APIs to facilitate retrieval/validation/storage of MS Share data.
 - Publish Application Design document for RDD’s review.
 - Follow RDD’s established development guidelines.
 - Test applications on all target browsers and device form factors.
 - Test for acceptable performance under load.
 - Commit all code to GitHub repository.
- UAT
 - Assist with deployment of integrated build in Sutter environment
 - Assist with user acceptance testing of the integrated build
 - Assist with bug tracking and remediations
- Post Go-Live Support
 - Support timely resolution of any issues with the application after go-live

Assumptions

The following assumptions were applied in creating this proposal.

- Mock implementation of the APIs (mimicking the performance of real APIs) that can be accessed from the Netwoven development environment will be provided to help implement/test the performance enhancements.
- All frameworks and design patterns followed in the previous MS-Share implementation will be reused.
- Written specifications to be provided for the UI enhancements, to facilitate offshore delivery.
- UI Changes limited to 2 rounds. Any addition rounds will be driven by a change request

3. Project Approach & Timeline

Netwoven anticipates the development and unit testing effort will take approximately 7 weeks. This excludes the UAT phase, timeline of which will be dictated by Sutter.

The project activities and deliverables are planned as follows:

Stage	Activities & Deliverables	Anticipated Timing
Project Kickoff	Activities Week 1: <ul style="list-style-type: none"> Review enhancement requirements in detail with Sutter Participate in design discussions to finalize requirements and mockups Set up mock APIs accessible from Netwoven Dev environment Create high level test plan 	Week 1 (1 week)
Development Sprints	Activities Weeks 2-3 (Sprint 1) <ul style="list-style-type: none"> Implement performance enhancements, session level caching, and manual user refresh Provide code drop in Dev branch in GitHub Perform Unit Testing on included components (success as well as error paths) Sprint 1 Deliverables <ul style="list-style-type: none"> Code Drop 1: <ul style="list-style-type: none"> Performance enhancements <hr/> Activities Week 4-5 (Sprint 2) <ul style="list-style-type: none"> Implement Order Symbol display logic Implement display logic for Infusion medications Implement revised treatment panel Perform Unit Testing on included components (success as well as error paths) Include feedback on performance enhancements from Code Drop 1 Sprint 2 Deliverables <ul style="list-style-type: none"> Code Drop 2: <ul style="list-style-type: none"> Display logic for Order symbols Display logic for infusion medications Revised treatment panel Revisions / remediations to performance enhancements <hr/> Activities Week 6 (Sprint 3)	Weeks 2-6 (5 weeks)

	<ul style="list-style-type: none">• Implement config file changes for Labs and Other Meds• Implement medication display logic changes (grouping by generic/brand status and strength/dosage)• Provide code drop in Dev branch in GitHub• Perform Unit Testing on included components (success as well as error paths)• Include Code Drop 2 feedback <p><i>Sprint 3 Deliverables</i></p> <ul style="list-style-type: none">• Code Drop 3<ul style="list-style-type: none">○ Final build with all enhancements	
Deployment and Integration	<p>Activities:</p> <ul style="list-style-type: none">• Deploy final code to Sutter environment• Create a pull request to commit final code to production branch in GitHub• Code reviews with Sutter RDD team <p>Deliverables:</p> <ul style="list-style-type: none">• Tested and deployed code• QA Plan with test results	Week 7 (1 week)

Anticipated resource effort spread is shown below:

	Onshore Architect	Offshore Architect + PM	Offshore Senior Developer 1	Offshore UI Designer	Offshore BA/QA
Development - neuroShare Bugs/Enhancements	16	152	220	32	82
Project Setup and Planning, Kickoff discussions, Test plan creation	16	8	16	8	16
Investigate and Fix Performance Issues (onshore API integration and performance testing, session level data caching, user workaround to refresh session data)	0	72	80		24
Revise Treatment Panel (onsite design discussions, mockups iteration and implementation)	0	16	24	24	8
Conditional display of Orders for same procedure	0	8	24		8
Add Labs for configuration file	0	8	16		8
Modify list of "other meds" in configuration file	0	4	8		8
Display Infusion Medications (identify infusion meds using config file, logic to determine End date for infusion meds)	0	16	24		8
Change Medication Display Logic (group medications by generic name for display regardless of brand, dosage etc.)	0	16	24		
Rename Other Meds	0	4	4		2
UAT & Remediation	0	60	40	8	32
Facilitate UAT & Perform required remediation		60	40	8	32
Post Go-Live Support	0	32	32	0	16
Deployment and Post Go-Live Support	0	32	32		16
Total Hours	16	244	292	40	130

4. Roles and Responsibilities

The project is made up of resources from Netwoven, Sutter, and third party development organizations.

Role	Responsibility	Named Resource
Project Manager		Anish Arora (Sutter Health)
Technology Architect	<ul style="list-style-type: none"> Assess and recommend application technology stack. Collect requirements and facilitate communication Run scrum with offshore team and manage delivery timelines and quality for the project Facilitate deployments in Sutter environment 	Gil Flamino (Sutter Health)
Offshore Architect/ Developers/UI/QA	<ul style="list-style-type: none"> Design and development of survey applications UI development and refinement Integration with Sutter and DocuSign APIs Unit testing and Integration testing Testing with various browsers and device form factors 	Netwoven Offshore Team : Sushant Agarwal (Architect) Debopoma Chaudhary (Senior Developer) Tanmay Chakraborty (UI) TBD (QA)

5. Pricing and Terms

This proposal is a time and materials project based on a variable hour work week for approximately 12 weeks in accordance with the cost breakdown shown below.

Service	Estimated Hours	Rate/Hr	Total Cost
Architect (Onshore)	16	\$200.00	\$3,200
Architect (Offshore)	244	\$65.00	\$15,860
Senior Developer (Offshore)	292	\$50.00	\$14,600
UI Designer (Offshore)	40	\$40.00	\$1,600
Engineer (QA, Deployment)	130	\$38.00	\$4,940
Total			\$40,200
Estimated Travel and Overheads			\$0
Estimated TOTAL COST			\$40,200

Invoicing will be done as follows:

- 40% on obtaining SOW signature
- 40% on mid-delivery upon completion of Sprint 2
- 20% on final-delivery upon completion of deployment and integration

Invoices will be paid on Net 60 basis as outlined in the MSA. Invoices will be sent to the following address and will include the purchase order number referenced below.

Mailing Address:

California Pacific Medical Center Research Institute
 Attn: Sarah Love, Director of Grants and Contracts
 475 Brannan Street, Suite 130
 San Francisco, CA 94107-5419
 Email: invoices@cpmcri.org
 Purchase Order Number: 28000005489

Netwoven, Inc.

DocuSigned by:

 22319D357D75420...

Authorized Signature

Viraj Bais

Printed Name

7/2/2018 | 11:02 AM PDT

Date

Sutter Bay Hospitals

DocuSigned by:

 E40BB6F1EFD3404...

Authorized Signature

Michael C. Rowbotham

Printed Name

7/2/2018 | 08:45 AM PDT

Date



Exhibit A - Statement of Work

MS-Share Questionnaire Finalization

In accordance with the Master Products, Software Services Agreement executed between Sutter Health and Netwoven Inc. on May 11, 2018, Sutter Bay Hospitals, an authorized Facility of Customer, agrees to purchase from Supplier and Supplier agrees to sell to Sutter Bay Hospitals the following Services:

1. Background & Project Overview

The MS-Share applications consist of a Questionnaire that users must complete prior to an appointment. Netwoven previously implemented the User Interface component of the Questionnaire (using Angular 4 Single Page Application framework). However, the APIs for MS-Share Questionnaire (to load/save data of patient responses in various Questionnaire pages) were not available to be integrated at the time of final delivery. In addition, some complex skip logic requirements were identified later that were not part of the initial specifications. This proposal addresses the effort and cost involved in enhancing the existing MS-Share Questionnaire implementation to meet these requirements and provide a build that can be tested by the users.

2. Proposal Description

The MS-Share Questionnaire enhancements within the scope of this proposal will support the functionality shown below

Question Formatting and Skip Logic implementation	<ul style="list-style-type: none">• Verify that skip logic specifications in the Excel provided are covered by the implementation.• Implement logic to determine the first page to be shown to user when a previously saved Questionnaire is revisited• Verify Question formatting and screen sequence.
API Integration	<ul style="list-style-type: none">• Integrate with APIs to load and save data on each page of the Questionnaire.• Verify Next / Previous navigation preserves and displays the data

Netwoven will provide the following services to the project.

- Development
 - Design and implement the above enhancements and integrate them into the current implementation of MS-Share application.
 - Integrate with Maestro APIs to facilitate retrieval/validation/storage of MS Share data.
 - Publish Application Design document for RDD's review.
 - Follow RDD's established development guidelines.
 - Test applications on all target browsers and device form factors.
 - Test for acceptable performance under load.
 - Commit all code to GitHub repository.
- UAT

- Assist with deployment of integrated build in Sutter environment
- Assist with user acceptance testing of the integrated build
- Assist with bug tracking and remediations
- Post Go-Live Support
 - Support timely resolution of any issues with the application after go-live

Assumptions

The following assumptions were applied in creating this proposal.

- APIs have been implemented by Sutter to save and fetch Questionnaire data.
- The scoring logic is implemented in the APIs and will not be implemented in the front-end application.
- When a patient restarts an incomplete questionnaire in a subsequent session, the questionnaire will start at the first applicable question. Any complex skip logic regarding this is out of scope.
- All frameworks and design patterns followed in the previous MS-Share Qx implementation will be reused.

3. Project Approach & Timeline

Netwoven anticipates the development and unit testing effort will take approximately 4 weeks. This excludes the UAT phase, timeline of which will be dictated by Sutter.

The project activities and deliverables are planned as follows:

Stage	Activities & Deliverables	Anticipated Timing
Project Kickoff	Activities Week 1: <ul style="list-style-type: none"> • Review requirements in detail with Sutter • Participate in design discussions to finalize requirements and mockups • Set up mock APIs accessible from Netwoven Dev environment • Create high level test plan 	Week 1 (1 week)
Development Sprints	Activities Week 2 (Sprint 1) <ul style="list-style-type: none"> • Verify skip logic implementation covers all cases in the Spec • Implement logic to determine the first page to be shown to user when a previously saved Qx is revisited • Verify Question formatting and screen sequence 	Weeks 2-3 (2 weeks)

	<ul style="list-style-type: none">• Provide code drop in Dev branch in GitHub• Perform Unit Testing on included components (success as well as error paths) <hr/>	
	<p>Activities Week 3 (Sprint 2)</p> <ul style="list-style-type: none">• Integrate with APIs to load and Save data on each Questionnaire page• Perform Unit Testing on included components (success as well as error paths)• Include feedback on performance enhancements from Code Drop 1 <p><i>Sprint 2 Deliverables</i></p> <ul style="list-style-type: none">• <i>Code Drop 2:</i><ul style="list-style-type: none">○ Final Questionnaire build to be deployed to Sutter environment for UAT	
Deployment and Integration	<p>Activities:</p> <ul style="list-style-type: none">• Deploy final code to Sutter environment• Create a pull request to commit final code to production branch in GitHub• Code reviews with Sutter RDD team <p>Deliverables:</p> <ul style="list-style-type: none">• Tested and deployed code• QA Plan with test results	Week 4 (1 week)

Anticipated resource effort spread is shown below:

	Offshore Architect + PM	Offshore Senior Developer 2	Offshore UI Designer	Offshore BA/QA
Deliverables				
Development - Questionnaire Realignment	72	80	8	64
Project Setup, Kickoff discussions, Test plan creation	16	16		8
Questionnaire UI (verify question formatting and skip logic changes per latest specs)	16	24	8	24
API Integration: load and save data on each page of the Qx) (new implementation, APIs were not ready available in previous cycle)	40	40		32
Out of Scope: Scoring Logic (this is to be implemented in the API)	0	0		0
UAT & Remediation	40	40	8	16
Facilitate UAT & Perform required remediation	40	40	8	16
Post Go-Live Support	24	24	0	8
Deployment and Post Go-Live Support	24	24	0	8
Total Hours	136	144	16	88
	\$ 8,840	\$ 7,200	\$ 640	\$ 3,344

4. Roles and Responsibilities

The project is made up of resources from Netwoven, Sutter, and third party development organizations.

Role	Responsibility	Named Resource
Project Manager		Anish Arora (Sutter Health)
Technology Architect	<ul style="list-style-type: none"> Assess and recommend application technology stack. Collect requirements and facilitate communication Run scrum with offshore team and manage delivery timelines and quality for the project Facilitate deployments in Sutter environment 	Gil Flamino (Sutter Health)
Offshore Architect/ Developers/UI/QA	<ul style="list-style-type: none"> Design and development of survey applications UI development and refinement Integration with Sutter and DocuSign APIs Unit testing and Integration testing Testing with various browsers and device form factors 	Netwoven Offshore Team : Sushant Agarwal (Architect) Sabyasachi Bal (Senior Developer) Tanmay Chakraborty (UI) Aniruddha Mukherjee (QA)

5. Pricing and Terms

This proposal is a time and materials project based on a variable hour work week for approximately 12 weeks in accordance with the cost breakdown shown below.

Service	Estimated Hours	Rate/Hr	Total Cost
Architect and Project Manager (Offshore)	132	\$65.00	\$8,580
Senior Developer (Offshore)	144	\$50.00	\$7,200
UI Designer (Offshore)	16	\$40.00	\$640
BA / QA Engineer (QA, Deployment)	88	\$38.00	\$3,344
Total			\$19,764
Estimated Travel and Overheads			\$0
Estimated TOTAL COST			\$19,764

Invoicing will be done as follows:


- 40% on obtaining signature of the SOW
- 40% on mid-delivery upon completion of sprint 2
- 20% on final-delivery upon completion of deployment and integration

Invoices will be paid on Net 60 basis as outlined in the MSA. Invoices will be sent to the following address and will include the purchase order number referenced below.

Mailing Address:

California Pacific Medical Center Research Institute
 Attn: Sarah Love, Director of Grants and Contracts
 475 Brannan Street, Suite 130
 San Francisco, CA 94107-5419
 Email: invoices@cpmcri.org
 Purchase Order Number: 28000005489

Netwoven, Inc.

DocuSigned by:

 22319B357B75420...

Authorized Signature

Viraj Bais

Printed Name

7/2/2018 | 11:02 AM PDT

Date

Sutter Bay Hospitals

DocuSigned by:

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Authorized Signature

Michael C. Rowbotham

Printed Name

7/2/2018 | 08:45 AM PDT

Date

BILL TO: CPMC RESEARCH INSTITUTE
475 Brannan St., Suite 130
San Francisco, California 94107

SHIP TO: CPMC RESEARCH INSTITUTE
Attn: **Michele Carter**
475 BRANNAN ST., SUITE 130
SAN FRANCISCO, CA 94107

Fax (650) 618-1541		G.I. ACCOUNT	GRANT NO.
		708200-62600-77160	280500002-0818
Account #			
VENDOR CODE	DATE REQUESTED		
142899	06/25/2018		

[illegible]


- Purchases for equipment and other supplies valued at \$3,500 per unit (including tax) must include a Purchase Justification with approval signatures.
- Abstracts & Publications must complete the addendum page.

DocuSigned by:
Michael C. Rowbotham
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DIRECTOR OF: ☐ Science ☐ K1 Operat

REQUESTED BY:

Ivelina Popova

The request above is reasonable, all direct cost to the project(s) to which it is being charged & there are no other costs associated with this request.

DocuSigned by:

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☐ Principal investigator

M PDT

APPROVED BY:

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Grants ar

6/28/2018 | 12:12 PM PDT

LINE(S) NO.	SIGNATURE	DATE RECEIVED	ORDER STATUS	COMMENTS:
			Received	<p>COMMENTS:</p> <p>Invoicing schedule is defined as follows: MS-Share Enhancements SoW - page 8 / MS-Share Questionnaire Finalization - page 14. Vendor Netwoven requires payment of 40% of the total SoW contracted at signing, 40% paid on completion of "Sprint 2" deliverable, with remaining 20% of the contract paid upon deployment and integration. Terms and Conditions defining behavior around data transfer and PHI have been reviewed separately by SutterHealth OGC and Privacy, and are incorporated as part of this PO.</p>
			Cancelled	
			Backordered	
			Backordered now Received	

Service Request Form

Record ID	16
Name of Requester:	JB Jones
Date Requested:	05-31-2018
Requester's Email:	jonesjb@sutterhealth.org
Best Phone to reach you by:	(925) 287-4028
Contract Type:	<input checked="" type="checkbox"/> New <input type="checkbox"/> Amendment/Continuation
Please indicate the total cost of this request:	<input type="checkbox"/> \$150,000 or more <input checked="" type="checkbox"/> greater than \$10,000 <input type="checkbox"/> between \$3,500 and \$10,000 <input type="checkbox"/> less than \$3,500

For orders greater than \$10,000 you are required to collect multiple bids or provide justification for why that was not possible.

For technical questions about this order, who at Sutter Health should we contact?

☒ Requester
☐ Other

INFORMATION ABOUT ENTITY SELECTED

Name of Entity/Individual Selected:	Netwoven
Address of Entity/Individual:	4000 Pimlico Drive Suite 114-103 Pleasanton, CA 94588-3474
Entity Contact Name:	Viraj Bais, Netwoven Inc.
Contact Email:	vbais@netwoven.com
Contact Phone Number:	408.242.6234
Have you ever used this entity before?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

If yes, please check all that apply.

- ☒ The entity completed all work.
☐ The entity did not complete all work.
☒ The entity was timely in their responses.
☐ The entity was not timely in their responses.
☐ The quality of the work was excellent.
☐ The quality of the work was good.
☒ The quality of the work was average.
☐ The quality of the work was below average.
☐ The quality of the work was poor.

You checked boxes that gave the entity some questionable ratings. Why do you want to use this entity now? Is there some other factor that needs to be taken into consideration?

There is too much work already invested and tight timeline for finishing. The work is acceptable for what's needed.

DESCRIPTION OF SERVICES

Please select the box that best describes the services you wish to obtain:

- ☐ I want to hire an individual to provide advice on my study.
- ☐ I need advice on my study but payment cannot be made to the individual, but must be made to their place of business.
- ☐ I want to hire a non-profit company to provide some analytic services.
- ☒ I want to hire a for-profit company to provide some services.
- ☐ I want to hire an individual to provide interventional/interactive services with subjects.
- ☐ I want to hire an entity to provide interventional/interactive services with subjects.

Please describe why these services are needed and how they fit within the scope of the project on which they are funded.

The MS-SHARE application is the primary deliverable for the CIAPM Project. Sutter Research, Development, and Dissemination will need to work with Netwoven Inc. in order to produce specific components of application. Specific components for the attached proposal include: 1) work to complete the patient questionnaire, including integration testing of the questionnaire APIs and development and testing of skip logic within the application; 2) bug fixes and enhancements based on feedback from the initial go-live in three clinic sites.

Where will the services be performed?

- ☐ At Sutter Health
- ☐ At the contractor site
- ☒ Other

Please specify where the services will be provided:

most of work is done offsite without access to network; one individual works onsite to assist with the integration between the external work and the internal work.

Will the vendor/contractor/consultant need to use their vehicle to be able to perform the services under this agreement?

- ☒ Yes
- ☐ No

Description of Services choices - select one:

- ☐ There will be only one SOW for this entity.
- ☒ We will utilize multiple SOWs for this entity.

Download the Scope of Work Form.

[Attachment: "Scope of Work.docx"]

Complete the section for the first SOW in the fields below and upload the subsequent SOW along with the estimated budget.

[document]

What are the payment terms for this individual?

- ☐ Pay a lump sum at the completion of the job.
- ☐ Pay hourly.
- ☐ Pay by milestones at completion of each milestone.
- ☐ Other
- ☐ Pay monthly (preferred)
- ☐ Pay quarterly
- ☐ Pay semiannually
- ☐ Pay once per year
- ☐ Pay weekly

Description of Materials

Will you be sending materials (data, samples, etc) to the entity/individual?

- ☐ Yes
- ☒ No

Please describe other information that the individual/entity will have access to:

- ☐ Medical Information
- ☐ Credit Card Information
- ☐ Business Confidential Information
- ☒ None of the above

Will the entity or individual need access to Sutter Health owned or rented facilities, equipment, databases, etc.

- ☒ Yes
- ☐ No

If yes, please check the applicable boxes:

- ☐ Facilities (entity/individual will do some or all work on site)
- ☒ Databases/Internet
- ☐ Email
- ☐ Equipment
- ☐ Computers
- ☒ Other

If Other, please describe:

one individual has access to test server on Sutter internet.

Entity Selection Process

Did you attempt to find someone or a department within Sutter Health to accomplish this project?

- ☐ Yes
- ☒ No

If not, why not?

There is no one in-house who can do this type of work. Sutter contracts out for it.

Did you investigate/search for other potential providers of service?

- ☐ Yes
- ☒ No

If not, please indicate why not:

- ☐ The individual selected is an expert in their field and is uniquely qualified for this service.
- ☐ The entity selected is the only entity that provides this service.
- ☐ The entity/individual was named and requested as a sole source in the original grant application and is an integral part of the study.
- ☐ The HHS or awarding agency or pass-through entity expressly authorized noncompetitive proposals in response to a written request.
- ☐ After solicitation of a number of sources, competition is determined inadequate.
- ☐ The public exigency or emergency for the requirement will not permit a delay resulting from competitive solicitation.
- ☒ Other

If other, please describe in detail:

There was too much legacy work done to consider another vendor at this stage in the process. That prior work was paid for from infrastructure funds, not research funds. It would have been too costly and time consuming for another vendor to be considered. This project is ending 8/31/18 but a NCE has been requested through 10/31/18

Please describe the qualifications of the selected entity/individual:

Netwoven Inc., founded in 2001 by senior-level executives from Microsoft, Oracle and Intel, is a leading professional services provider using Microsoft technologies and helps companies design and deploy solutions for collaboration, analytics, and customer insights. Netwoven also works with organizations to help them with their journey to the cloud using the Microsoft cloud.

- ☐ Local industry leader when it comes to back-office systems
- ☐ Skilled in the technologies used in our platform (Maestro, Mulesoft) and solutions, including general familiarity with healthcare
- ☐ Have senior developer experience with Mulesoft design and development, as well as with web client applications (e.g. SHARE apps)
- ☐ Experienced Sutter-authorized vendor


Please list all the people who participated in the research and/or selection of this vendor:

JB Jones, Gil Flamino, David Odell
Kristen Wilson-Jones (outside vendor)

Sutter Health's Conflict of Interest Policy

[Attachment: "Conflict of Interest Policy.pdf"]

I certify that I have read Sutter Health's policy on Conflict of Interest in vendor selection, Policy 18-807.

☒ Yes ☐ No 

6/27/2018 | 08:1

Please download the attached form for the attestation of each person involved in the decision making for this entity.

[Attachment: "Conflict of Interest Statement for Research Services Agreement.docx"]

I certify that having read the policy, I am uploading my signed statement.

[document]
(for more than one person, combine into a single pdf and upload.)

FUNDING INFORMATION

How much do you want to pay for the term of this agreement (in dollars):

\$59,964

Start Date for Service:

06-10-2018
(If grant, should be on start date or after of current year.)

End Date for this Service:

10-31-2018
(If grant, should be on or before the end date of current year.)

Will there be more than one year of service for this entity/individual?

☐ Yes
☒ No
☐ Possibly

Please upload the bid or any documentation for the hourly rate here:

Will more than one activity be used to pay for these services?

☐ Yes
☒ No

Activity Number to be charged:

280500002-0818

Amount to be charged to this activity:

not to exceed 59,964

Project Title:

CIAPM

Source of Funding

☐ Federal prime grant
☐ Federal flow through (prime award through another institution)
☐ Private Grant Funds
☐ Industry funds
☐ Internal funds (Sutter Health, gifts etc.)
☒ Other

If other, please specify:

State flow through funds

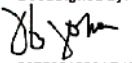
Please add any additional comments you think we need to know to process this agreement:

needs to be done urgently

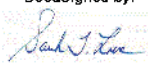
All the information contained herein accurately represents the actions and decisions that were made and taken for this purchase.

☒ Yes
☐ No

Approved

DocuSigned by:

2075381080AD4DD...

6/27/2018 | 08:11 AM PDT

DocuSigned by:

18535ECF33FA45A...

6/26/2018 | 18:33 PM



Proposal for MS-Share Enhancements

Exhibit A - Statement of Work

Proposal for: Sutter Health RD&D
Date: May 3rd, 2018
Version: 1.0

Prepared By: Viraj Bais, Netwoven Inc.
Niraj Tenany, Netwoven Inc.

1. Background & Project Overview

The MS-Share clinic application consists of several screens and components as described in the Specifications created by Sutter Health. Netwoven previously implemented the User Interface component of the application (using Angular 4 Single Page Application framework and the d3.js charting library) and a few APIs (using MuleSoft and Postgres Database) as described in the respective specifications. This proposal addresses the effort and cost involved in making enhancements to the existing MS-Share implementation identified by Sutter Health during pilot use of the application.

2. Proposal Description

The MS-Share enhancements within the scope of this proposal will support the functionality shown below

Fix Performance Issues	<ul style="list-style-type: none">• Spinning wait timer should not freeze during API calls. Should either continue spinning if API call is in progress, disappear if the API call times out, or disappear and show an error message if there was an error with the API call.• Eliminate duplicate API calls by using cached data within the same session.• There must be a user workaround to refresh the data within the same session.
Revise Treatment Panel	<ul style="list-style-type: none">• Make the treatment panel bigger and easier to navigate for the purpose of understanding treatment history of one or multiple medications.• Participate in design discussions and finalization of mockups
Add Order Symbol Display Logic	<ul style="list-style-type: none">• If there are multiple orders for the same procedure and there is at least one completed order X days after a null order, only show the completed orders. Otherwise, if none of the orders are completed or if they are not within 5 days of one another, show all.
Edit Lab Configuration file	<ul style="list-style-type: none">• Add a list of labs to the “Labs” configuration file
Edit Lab Configuration file	<ul style="list-style-type: none">• Remove a list of medications from the “Other Meds” configuration file.
Infusion Medications Display Logic	<ul style="list-style-type: none">• Determine if a medication is an infusion med based on the API response• In data layer 2, use a field from the API response as the “End”. If data field doesn’t exist, use a list to link medication names to effective duration. Use effective duration as the “End”
Change medication display logic	<ul style="list-style-type: none">• Group medications by generic name regardless of generic/brand status, strength/dosage, or form.• If medications of different generic/brand status, strength/dosage, or form overlap, there must be a visual differentiation.• In data layer 1, display the medicationOrders.medication.generic_name from the API response.• In data layer 2, display the medicationOrders.medication.name from the API response.
Rename “Other Meds”	<ul style="list-style-type: none">• Rename “Other Meds” category in the left nav bar to a text (to be finalized later)

Netwoven will provide the following services to the project.

- Development
 - Design and implement the above enhancements and integrate them into the current implementation of MS-Share application.
 - Integrate with Maestro APIs to facilitate retrieval/validation/storage of MS Share data.
 - Publish Application Design document for RDD’s review.
 - Follow RDD’s established development guidelines.
 - Test applications on all target browsers and device form factors.
 - Test for acceptable performance under load.
 - Commit all code to GitHub repository.
- UAT
 - Assist with deployment of integrated build in Sutter environment
 - Assist with user acceptance testing of the integrated build
 - Assist with bug tracking and remediations
- Post Go-Live Support
 - Support timely resolution of any issues with the application after go-live

Assumptions

The following assumptions were applied in creating this proposal.

- Mock implementation of the APIs (mimicking the performance of real APIs) that can be accessed from the Netwoven development environment will be provided to help implement/test the performance enhancements.
- All frameworks and design patterns followed in the previous MS-Share implementation will be reused.
- Written specifications to be provided for the UI enhancements, to facilitate offshore delivery.
- UI Changes limited to 2 rounds. Any addition rounds will be driven by a change request

3. Project Approach & Timeline

Netwoven anticipates the development and unit testing effort will take approximately 7 weeks. This excludes the UAT phase, timeline of which will be dictated by Sutter.

The project activities and deliverables are planned as follows:

Stage	Activities & Deliverables	Anticipated Timing
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Project Kickoff	Activities Week 1: <ul style="list-style-type: none">Review enhancement requirements in detail with SutterParticipate in design discussions to finalize requirements and mockupsSet up mock APIs accessible from Netwoven Dev environmentCreate high level test plan	Week 1 (1 week)
Development Sprints	Activities Weeks 2-3 (Sprint 1) <ul style="list-style-type: none">Implement performance enhancements, session level caching, and manual user refreshProvide code drop in Dev branch in GitHubPerform Unit Testing on included components (success as well as error paths) Sprint 1 Deliverables <ul style="list-style-type: none">Code Drop 1:<ul style="list-style-type: none">Performance enhancements <hr/> Activities Week 4-5 (Sprint 2) <ul style="list-style-type: none">Implement Order Symbol display logicImplement display logic for Infusion medicationsImplement revised treatment panelPerform Unit Testing on included components (success as well as error paths)Include feedback on performance enhancements from Code Drop 1 Sprint 2 Deliverables <ul style="list-style-type: none">Code Drop 2:<ul style="list-style-type: none">Display logic for Order symbolsDisplay logic for infusion medicationsRevised treatment panelRevisions / remediations to performance enhancements <hr/> Activities Week 6 (Sprint 3) <ul style="list-style-type: none">Implement config file changes for Labs and Other MedsImplement medication display logic changes (grouping by generic/brand status and strength/dosage)Provide code drop in Dev branch in GitHub	Weeks 2-6 (5 weeks)

- Perform Unit Testing on included components (success as well as error paths)
- Include Code Drop 2 feedback

Sprint 3 Deliverables

- Code Drop 3
 - Final build with all enhancements

Deployment and Integration

Week 7
(1 week)

Activities:

- Deploy final code to Sutter environment
- Create a pull request to commit final code to production branch in GitHub
- Code reviews with Sutter RDD team

Deliverables:

- Tested and deployed code
- QA Plan with test results

Anticipated resource effort spread is shown below:

	Onshore Architect	Offshore Architect + PM	Offshore Senior Developer 1	Offshore UI Designer	Offshore BA/QA
Development - neuroShare Bugs/Enhancements	16	152	220	32	82
Project Setup and Planning, Kickoff discussions, Test plan creation	16	8	16	8	16
Investigate and Fix Performance Issues (onshore API integration and performance testing, session level data caching, user workaround to refresh session data)	0	72	80		24
Revise Treatment Panel (onsite design discussions, mockups iteration and implementation)	0	16	24	24	8
Conditional display of Orders for same procedure	0	8	24		8
Add Labs for configuration file	0	8	16		8
Modify list of "other meds" in configuration file	0	4	8		8
Display Infusion Medications (Identify infusion meds using config file, logic to determine End date for infusion meds)	0	16	24		8
Change Medication Display Logic (group medications by generic name for display regardless of brand, dosage etc.)	0	16	24		
Rename Other Meds	0	4	4		2
UAT & Remediation	0	60	40	8	32
Facilitate UAT & Perform required remediation		60	40	8	32
Post Go-Live Support	0	32	32	0	16
Deployment and Post Go-Live Support	0	32	32		16
Total Hours	16	244	292	40	130

4. Roles and Responsibilities

The project is made up of resources from Netwoven, Sutter, and third party development organizations.

Role	Responsibility	Named Resource
Project Manager		Anish Arora (Sutter Health)
Technology Architect	<ul style="list-style-type: none"> Assess and recommend application technology stack. Collect requirements and facilitate communication Run scrum with offshore team and manage delivery timelines and quality for the project Facilitate deployments in Sutter environment 	Gil Flamino (Sutter Health)
Offshore Architect/ Developers/UI/QA	<ul style="list-style-type: none"> Design and development of survey applications UI development and refinement Integration with Sutter and DocuSign APIs Unit testing and Integration testing Testing with various browsers and device form factors 	Netwoven Offshore Team : Sushant Agarwal (Architect) Debopoma Chaudhary (Senior Developer) Tanmay Chakraborty (UI) TBD (QA)

5. Pricing and Terms

This proposal is a time and materials project based on a variable hour work week for approximately 12 weeks in accordance with the cost breakdown shown below.

Service	Estimated Hours	Rate/Hr	Total Cost
Architect (Onshore)	16	\$200.00	\$3,200
Architect (Offshore)	244	\$65.00	\$15,860
Senior Developer (Offshore)	292	\$50.00	\$14,600
UI Designer (Offshore)	40	\$40.00	\$1,600
Engineer (QA, Deployment)	130	\$38.00	\$4,940
Total			\$40,200
Estimated Travel and Overheads			\$0
Estimated TOTAL COST			\$40,200

Invoicing will be done as follows:

- 40% on obtaining SOW signature
- 40% on mid-delivery upon completion of Sprint 2
- 20% on final-delivery upon completion of deployment and integration

Invoices will be paid on Net 60 basis as outlined in the MSA

Netwoven, Inc.

Sutter Health

Authorized Signature

Authorized Signature

Printed Name

Printed Name

Date

Date



Proposal for MS-Share Questionnaire Finalization

Exhibit A - Statement of Work

Proposal for: Sutter Health RD&D
Date: May 3rd, 2018
Version: 1.0

Prepared By: Viraj Bais, Netwoven Inc.
Niraj Tenany, Netwoven Inc.

1. Background & Project Overview

The MS-Share applications consist of a Questionnaire that users must complete prior to an appointment. Netwoven previously implemented the User Interface component of the Questionnaire (using Angular 4 Single Page Application framework). However, the APIs for MS-Share Questionnaire (to load/save data of patient responses in various Questionnaire pages) were not available to be integrated at the time of final delivery. In addition, some complex skip logic requirements were identified later that were not part of the initial specifications. This proposal addresses the effort and cost involved in enhancing the existing MS-Share Questionnaire implementation to meet these requirements and provide a build that can be tested by the users.

2. Proposal Description

The MS-Share Questionnaire enhancements within the scope of this proposal will support the functionality shown below

Question Formatting and Skip Logic implementation	<ul style="list-style-type: none">• Verify that skip logic specifications in the Excel provided are covered by the implementation.• Implement logic to determine the first page to be shown to user when a previously saved Questionnaire is revisited• Verify Question formatting and screen sequence.
API Integration	<ul style="list-style-type: none">• Integrate with APIs to load and save data on each page of the Questionnaire.• Verify Next / Previous navigation preserves and displays the data

Netwoven will provide the following services to the project.

- Development
 - Design and implement the above enhancements and integrate them into the current implementation of MS-Share application.
 - Integrate with Maestro APIs to facilitate retrieval/validation/storage of MS Share data.
 - Publish Application Design document for RDD’s review.
 - Follow RDD’s established development guidelines.
 - Test applications on all target browsers and device form factors.
 - Test for acceptable performance under load.
 - Commit all code to GitHub repository.
- UAT
 - Assist with deployment of integrated build in Sutter environment
 - Assist with user acceptance testing of the integrated build
 - Assist with bug tracking and remediations

- Post Go-Live Support
 - Support timely resolution of any issues with the application after go-live

Assumptions

The following assumptions were applied in creating this proposal.

- APIs have been implemented by Sutter to save and fetch Questionnaire data.
- The scoring logic is implemented in the APIs and will not be implemented in the front-end application.
- When a patient restarts an incomplete questionnaire in a subsequent session, the questionnaire will start at the first applicable question. Any complex skip logic regarding this is out of scope.
- All frameworks and design patterns followed in the previous MS-Share Qx implementation will be reused.

3. Project Approach & Timeline

Netwoven anticipates the development and unit testing effort will take approximately 4 weeks. This excludes the UAT phase, timeline of which will be dictated by Sutter.

The project activities and deliverables are planned as follows:

Stage	Activities & Deliverables	Anticipated Timing
Project Kickoff	Activities Week 1: <ul style="list-style-type: none">• Review requirements in detail with Sutter• Participate in design discussions to finalize requirements and mockups• Set up mock APIs accessible from Netwoven Dev environment• Create high level test plan	Week 1 (1 week)
Development Sprints	Activities Week 2 (Sprint 1) <ul style="list-style-type: none">• Verify skip logic implementation covers all cases in the Spec• Implement logic to determine the first page to be shown to user when a previously saved Qx is revisited• Verify Question formatting and screen sequence• Provide code drop in Dev branch in GitHub• Perform Unit Testing on included components (success as well as error paths)	Weeks 2-3 (2 weeks)

Activities Week 3 (Sprint 2) <ul style="list-style-type: none">Integrate with APIs to load and Save data on each Questionnaire pagePerform Unit Testing on included components (success as well as error paths)Include feedback on performance enhancements from Code Drop 1			
Sprint 2 Deliverables <ul style="list-style-type: none">Code Drop 2:<ul style="list-style-type: none">Final Questionnaire build to be deployed to Sutter environment for UAT			
Deployment and Integration	Activities: <ul style="list-style-type: none">Deploy final code to Sutter environmentCreate a pull request to commit final code to production branch in GitHubCode reviews with Sutter RDD team Deliverables: <ul style="list-style-type: none">Tested and deployed codeQA Plan with test results	Week 4 (1 week)	

Anticipated resource effort spread is shown below:

Deliverables	Offshore Architect + PM	Offshore Senior Developer 2	Offshore UI Designer	Offshore BA/QA
Development - Questionnaire Realignment	72	80	8	64
Project Setup, Kickoff discussions, Test plan creation	16	16		8
Questionnaire UI (verify question formatting and skip logic changes per latest specs)	16	24	8	24
API Integration: load and save data on each page of the Qx (new implementation, APIs were not ready available in previous cycle)	40	40		32
Out of Scope: Scoring Logic (this is to be implemented in the API)	0	0		0
UAT & Remediation	40	40	8	16
Facilitate UAT & Perform required remediation	40	40	8	16
Post Go-Live Support	24	24	0	8
Deployment and Post Go-Live Support	24	24	0	8
Total Hours	136	144	16	88
	\$ 8,840	\$ 7,200	\$ 640	\$ 3,344

4. Roles and Responsibilities

The project is made up of resources from Netwoven, Sutter, and third party development organizations.

Role	Responsibility	Named Resource
Project Manager		Anish Arora (Sutter Health)
Technology Architect	<ul style="list-style-type: none"> Assess and recommend application technology stack. Collect requirements and facilitate communication Run scrum with offshore team and manage delivery timelines and quality for the project Facilitate deployments in Sutter environment 	Gil Flamino (Sutter Health)
Offshore Architect/ Developers/UI/QA	<ul style="list-style-type: none"> Design and development of survey applications UI development and refinement Integration with Sutter and DocuSign APIs Unit testing and Integration testing Testing with various browsers and device form factors 	Netwoven Offshore Team : Sushant Agarwal (Architect) Sabyasachi Bal (Senior Developer) Tanmay Chakraborty (UI) Aniruddha Mukherjee (QA)

5. Pricing and Terms

This proposal is a time and materials project based on a variable hour work week for approximately 12 weeks in accordance with the cost breakdown shown below.

Service	Estimated Hours	Rate/Hr	Total Cost
Architect and Project Manager (Offshore)	132	\$65.00	\$8,580
Senior Developer (Offshore)	144	\$50.00	\$7,200
UI Designer (Offshore)	16	\$40.00	\$640
BA / QA Engineer (QA, Deployment)	88	\$38.00	\$3,344
Total			\$19,764
Estimated Travel and Overheads			\$0
Estimated TOTAL COST			\$19,764

Invoicing will be done as follows:

- 40% on obtaining signature of the SOW
- 40% on mid-delivery upon completion of sprint 2
- 20% on final-delivery upon completion of deployment and integration

Invoices will be paid on Net 60 basis as outlined in the MSA

Netwoven, Inc.

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