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Mayor



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#### OFFICE OF ECONOMIC DEVELOPMENT

COUNTY OF MAUI 2200 MAIN STREET, SUITE 305, WAILUKU, MAUI, HAWAII 96793, USA Telephone: (808)270-7710 Facsimile: (808)270-7995 Email: economic.development@mauicounty.gov

July 12, 2017

Honorable Alan M. Arakawa Mayor, County of Maui 200 South High Street Wailuku, HI 96793

For Transmittal to:

Yuki Lei K. Sugimura, Chair Policy, Economic Development, And Agriculture Committee 200 S. High Street Wailuku, HI 96793

Dear Councilmember Sugimura,

APPROVED FOR TRANSMITTAL

Mayor Date

SUBJECT: Economic Development Revolving Fund (PEA-36)

Attached are the EDRF reports requested by the PEA committee on July 12, 2017.

Should you have any questions, please contact me.

Sincerely,

Teena M. Rasmussen, Director



June 17, 2017

Teena Rasmussen
Maui County, Office of Economic Development
EDRF
One Main Plaza
2200 So. High St. #305
Wailuku, HI 96793

Re: Maui Brewing Co. EDRF Status Report

Dear Mrs. Rassmussen,

Please accept this letter as a status update for the EDRF grant program project with Maui Brewing Co.

We have purchased and received most of the equipment necessary for our project to commence. We are awaiting final details on our pasteurizer from Germany as there were some changes to technology mainly around reducing energy and water consumption that we wanted to capture. Additionally we have just this past week resolved the issues with regards to access to sugar. The closure of HC&S was a huge blow to the soda program as we relied on the locally grown sugar. We will now be importing bulk containers of organic cane sugar from South America and sharing this resource with other producers on island.

We have received all of the necessary equipment for distillation and have set the equipment in place. We plan to complete installation in the fall. As of June 15<sup>th</sup> we now have Federal TTB clearance for our DSP permit. The only issue we foresee with local licensing will be Maui Liquor Control although we have submitted all necessary paperwork to the department.

If all goes to plan we should have locally produced spirits and soda beginning to flow by end of the year.

Mahalo in advance for your assistance. Please advise should you need anything else from us. My telephone and email address are below.

Sincerely,

Garrett VV. Marrero CEO/Founder

> Handcrafted Ales & Lagers Brewed with Aloha 605 Lipoa Parkway, Kihei, HI 96753 808.213.3002

# UPTOWN SERVICE INC. Dba UPTOWN CHEVRON FOOD MART & CAR WASH 2085 Main Street Wailuku, HI 96793

June 16, 2017

To: Teena Rasmussen

Director

Office of Economic Development

Re: Status Report for Uptown Chevron Project

Dear Teena.

I am informing you of a delay in our project schedule. I will not be requesting additional grant funds as scheduled for January, April, and July 2016 as the next disbursement was allocated for construction work.

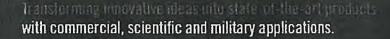
The most recent delay has been the result of my architect and engineers being busy with other jobs. My architect was ready to submit our permit's for approval but found out an additional requirement was needed because we were using County funds. We have submitted our plans to this Disability and Communication Access Board and are awaiting their response.

I am estimating that construction to start early in 2018 and the length of the construction is 6 months so we are looking at project completion to be in 2018.

Thank you,

Alvin Makimoto

Uptown Chevron





To: Maui County Office of Economic Development

From: HNu Photonics, LLC

Date: June 16, 2017 (Feb 2016-May 2017)

Subject: HNu Photonics Project Status for Economic Development Revolving Fund

# I. Summary of Program Status

HNu Photonics has directly benefited from the Economic Development Revolving Fund Grant by providing funds for the resources necessary to help launch our space-based biotechnology and science platforms with NASA.

As briefed in last year's summary, HNu has been making substantial progress developing the SCORPIO-V BioChip SpaceLab (BCSL) platform. This is an ultra-portable, remote-controlled, automated microfluidics, imaging, and analysis platform for general cell, tissue and organism investigations on the International Space Station (ISS).

BioChip SpaceLab is generating rapid interest among principal investigators within academia and industry scientists as a premier platform to conduct their research in space. HNu has been partnering with several investigators along with their proposal submissions for funding the use of BCSL for their desired experiments onboard the International Space Station.

We have successfully completed our Preliminary Design Review (PDR) in June 2016, hosting NASA at our facility to observe our hardware test development, presentations, and holding working groups. Next, we completed our Phase I Safety Review of our BCSL payload at Johnson Space Center (JSC) NASA, December 2016, which was a major milestone for the project. We are working toward our Critical Design Review at this time which is scheduled for September 2017.

In addition, we have been awarded an IDIQ (Indefinite Delivery, Indefinite Quantity) Service Contract with NASA. This vehicle funded an additional \$1.5M under the first Task Order around September 2016. This Task Order (TO) provides pre-flight experiment development documentation and implementation of three flight experiment checkouts using the BioChip SpaceLab platform per the contract.

Furthermore, we are finalizing negotiation on the second Task Order on the IDIQ to develop and build a second platform for the International Space Station. This product is titled Photonics ISS Multipurpose Microscopy Suite (PIMMS). The PIMMS payload will be able to perform physical and life science investigations in real-time with high-resolution microscopy. It will provide a

# with commercial, scientific and military applications.

versatile solution for upgrading the current microscopy facilities onboard the ISS National Lab (ISS-NL) to current laboratory state-of-the-art technology. We are estimating this task order to be funded within the next few weeks.

As part of the NASA -REDDI (Research, Development, Demonstration, and Infusion) Solicitation, we were awarded a contract in January 2017 to participate in demonstrating new technologies for flight tests for future space exploration on Blue Origin's New Shepard Sub-orbital vehicle.

Our test bed is titled BioChip Sub-Orbital Lab (BCSOL): An Automated Microfluidic and Imaging Platform for Live-Cell Investigations in Microgravity. Our demonstration will be an automated platform to visualize in real time how live cells will react to the different phases of a rocket launch. Cell cultures with fluorescent genes will be pumped through channels and recorded by an optical microscope camera during flight.

We are proud to be at the forefront of commercializing medical research on the ISS and EDRF came at a critical juncture to help make that happen. We hope that the success of this program will help grow the high-tech industry for the State and County. HNu is well on its way to becoming a key technology leader in building space platforms for future space exploration and benefits to mankind. Please check out: <a href="https://www.scorpiov.com">www.scorpiov.com</a>

# II. Company Growth and Job Creation

Hnu Photonics is committed to growing technology in Hawaii and bringing in skilled scientist and engineers into the community. As outlined below, several permanent professionals in science and technology were added to the HNu team this quarter to help us achieve our goals.

Technical Professionals hired within this reporting period:

- Devin Ridgley, PhD, Project Scientist of biotechnology and cell biology, March 1, 2016
- John Ernesto Messersmith Senior Software Engineer, February 2016,
- Ben Hamel- Software Engineer and algorithm development, June 2016.
- Rodell Agdinaoay Electro-Mechanical Test Engineer, February 2017
- Sylvia Loh, BioEngineer, January 2017
- Mark Mulrooney, PhD, Senior Research Scientist, May 2016
- · Bill Goodman, PhD, Vice President of Space Systems, October 2016
- Levy Silva, Expert Machinist/Mechanic, September 2016



June 16, 2017

To: County of Maui - Office of Economic Development

From Sea Link of Hawaii, Inc.

Grant Number: G4121

Program/Project Title: Molokai Ferry Project

RE: ANNUAL REPORT (Final Report Submitted 10/5/16

Program/Project description: To Sea Link of Hawaii, Inc. (SLH) to offset operational losses while SLH works through application of tariff change with the PUC. The change requested to suspend unprofitable voyages due to low ridership numbers due to increased airline service between Molokai and Maui and due to depressed economic conditions on Molokai.

Results of program/project: SLH continued to operate at a loss from April 1, 2015 to July 1, 2015 (3 months at \$35,000.00 per month, total \$105,000.00). The grant of \$105,000.00 from the County of Maui, State of Hawaii was issued on August 8, 2015 to SLH. The grant money was appropriated to offset operational losses for July 2015, August 2015 and September 2015. Marketing efforts: news media, website updates and public notices on status of the Molokai ferry and upcoming changes upon PUC approval of schedule change.

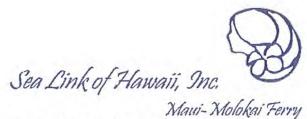
Dashboard of Performance Measures: See EXHIBIT A

Grant funding assisted the community: SLH was able to provide 5 special charters in September 2015 for Maui County schools and community at a reduced rate.

Report...actual outcomes and results: SLH shareholders continued and continues to take losses even with the awarded grant of \$105,000.00. SLH averaged approximately 6 full-time and 5 part-time employees, SLH was able to retain most of the employees and couple employees voluntarily resigned to seek other employment and 1 employee was released due to logistical issues.

The one-time grant fund was a very limited solution to the overall financial condition of the company; however, the simple fact that the Maui County granted any money at all to support the ferry spoke volumes to the PUC. See EXHIBIT B

Unfortunately, the Federal DOT elected to subsidize two of Molokai's air carriers with grants totaling \$3,454,474 over three years. These grants allowed four increased air service at reduced rates which made the ferry operation unsustainable due to decreased ridership. The ferry ceased operations on August 25, 2016. Losses for 2016 were \$332,733. The PUC operating certificate was surrendered and no plans exist to resume service.



Describe how this program/project could be improved. The County of Maui, State of Hawaii, Inc. should seriously consider adopting the ferry service from Sea Link of Hawaii, Inc. and provide affordable service to the people of Maui County's schools and government agencies.

Five digital photos and report is included on a USB Flash Drive

Final Reimbursement Budget Summary: See EXHIBIT C 2015 PUC Annual Income Statement



#### **EXHIBIT A**

#### Dashboard of Performance Measures

Month	No. of Passengers Per Month	
July 2015	1306	
August 2015	1278	
September 2015	1710 *special groups and charters included	

# Groups and special runs:

\*September 11, 2015 - 48 pax Lahainaluna High School

\*September 12, 2015 – 28 pax Molokai High School (cross country)

\*September 18, 2015 - 77 pax Molokai High School (volleyball) & Seabury Hall (football)

\*September 19, 2015 - 229 pax Canoe Club

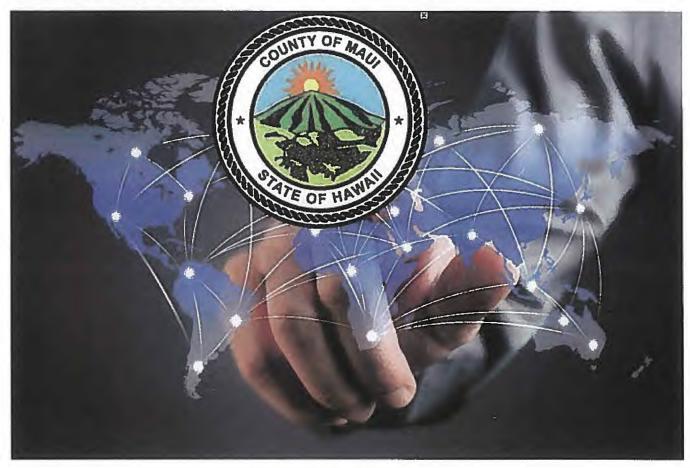
September 24, 2015 – 35 pax Molokai High School (football)

September 25, 2015 – 12 pax Molokai High School (air rifle)

\*September 26, 2015 – 38 pax Molokai High School (football)







# June 2017 Updated Report:

The Economic Development Revolving Fund (EDRF)
Grant #G4120
Maui County

# Presented by:

Plexis Healthcare Systems, Inc.
Jorge Yant, President and CEO
340 Oak Street
Ashland, OR 97520
541-494-2506
jyant@plexisweb.com

Maui Innovation Group, Inc.
Ned Davis, Founder & CEO
2742 PuuHoolai St
Kihei, HI 96753
808 866 4347
Ned@MauiInnovationGroup.com

Date: June 16, 2017



# TABLE OF CONTENTS

EXECUTIVE SUMMARY	1
TECHNICAL APPROACH	2
MARKETING AND BUSINESS DEVELOPMENT PROGRESS	21
GOALS AND OBJECTIVES:	22
STATEMENT OF WORK	23
SCHEDULE	23
DETAILED DESCRIPTION OF WORK PERFORMED	24
BUDGET PROGRESS	25
CURRENT EMPLOYEE COUNT	
CONCLUSIONS	
FUTURE WORK	28

# **Executive Summary**

Maui Innovation Group LLC and Plexis Healthcare Systems Inc. have combined their experience and resources to create a Medical Management Software Application initially called "Quantum Care Management", now branded simply as *Canopy Care*. This complex case management tool helps coordinate care across various doctors, specialists, and facilities.

The software has now been deployed with 3 customers in Beta. An additional 4 companies are currently in negotiations with us. Development continues with new advances and additions to the program being delivered on a roughly bi-weekly basis. We continue to demonstrate it to new customers, presented it at a software conference, and are generally receiving a high level of interest in the product. We have recently expanded into a bigger facility, with our own machine shop that will allow us to better tackle additional projects.

This project in its current form and in reality probably our company itself was made possible by the County of Maui's EDRF fund. The CEO of Plexis, Jorge Yant, and the CEO of Maui Innovation Group, Ned Davis, were looking for a project to work on together. Mr Yant was initially willing to invest on the order of \$100k with Dr. Davis to remotely manage the development of a medical case management product in Costa Rica. Dr. Davis mentioned Maui's EDRF grant to him, and they struck a deal to move the entire project including the code development to Maui resulting in \$991,000 of additional investment in Maui County above and beyond the \$175k EDRF Grant from the county and larger than the originally committed \$400k – This has been a win –win – win situation for all involved: Plexis, Maui Innovation Group, and the County of Maui – Over 5x return on investment already – just in software development work alone (almost all to the local economy in salaries, benefits, and overhead such as office rent and supplies right here in Maui County), and a path to millions of dollars of recurring revenue in the future.

Furthermore, by moving this work to Maui instead of offshore, Maui Innovation Group has been able to create a much more enduring business presence on Maui with 5 regular employees, an office, and payroll & benefits including health insurance, workman's comp, TDI, etc. – All of the trappings of a full-fledged employer on island. Furthermore, we have leveraged this business to bid additional development programs that we hope to expand into.

We would like to express our incredible gratitude for this wonderful program and for selecting us as one of the first recipients! This program made it possible for us to bring a line of software work here that would have likely gone offshore without it -- Imagine -- It made our little R&D outfit on Maui being competitive with outsourcing software hubs like Costa Rica! The promise of the EDRF was the lure that closed the deal for us.

Quantum Care is designed to be the next generation tool for managing patient care across the entire healthcare continuum, resulting in lower healthcare costs and improving access to quality care. The current medical landscape involves very little coordination between healthcare providers, especially

with patients that have chronic or acute conditions. Our solution is implemented within the guidelines of the ACA and the needs of the healthcare insurance marketplace. The software was designed by a team of experts with many years of experience in medical management for managed care organizations.

Maui Innovation Group is leading the product development and quality assurance efforts of the Quantum Care product from Maui County. Plexis has provided the initial design and is marketing this new product to its existing customers in place of the third party solutions those customers are currently employing with Plexis' products. Maui Innovation Group will also help market and support this product to new customers as well.

Once Quantum Care Management is in production installations, Maui will continue to be the base of operations for product development, quality assurance, product design, technical support and other functions for Quantum Care, and will also take on other projects that will require additional on-site staff.

The estimated market for this class of products worldwide is in the billions of dollars, and it is currently one of the fastest growing markets in the US economy due primarily to the success of enrollment in the Affordable Care Act and the recession proof healthcare marketplace. Even a small market share for QCM will result in large future increases in revenue and staffing levels for Maui Innovation Group and significant gains for Plexis.

Plexis Healthcare Systems is already a successful software company in business since 1996 which sells ~\$15M a year worth of software and services to healthcare payers across the globe. Its current base of operation is in Ashland Oregon with offices in Chicago, Southern California and Arizona. Plexis was able to expand its presence in the Hawaiian market by creating this joint venture with Maui Innovation Group, a start-up company headed up by Ned Davis, a Maui Resident and active member of the local business community.

We have commenced this software project, hired a team of engineers, created a working prototype of the software, and presented at the Plexis annual users' conference for potential customer interest. We received multiple inquiries about our software, installed the product with 3 customers, and will bid to provide it to the Bahamas for their national healthcare system as well.

We have achieved the hiring goals laid forth in our proposal, with a current headcount of 5 FTE's, and are located in the Kihei tech park with all applicable insurances, licenses, and certifications in goodstanding. And we are likely to expand further as soon as more of these leads (Bahamas or domestic) comes to fruition.

# **Technical Approach**

We have created a complex medical case management software tool, demonstrated it to customers, received follow up inquiries, and are in 3 beta sites. Altogether, we have written 76,000 lines of code (this line count is offered as an example of the scale of the work completed, and may wax or wane as the program progresses, the software is streamlined, and the configuration is solidified). The following section details the software that we have created thanks to the EDRF grant and the matching funds from Plexis.

Upon launching the program, a user is presented with a login screen as shown in Figure 1 – Note that a user is offered the option to select a language at the initial login – Our software offers built in translation capability allowing users to work in their native language or perhaps one of their patient's native languages.





Figure 1: Login Screen

Next upon logging in, the user is presented with a Navigator tab depicting information about that User's assigned Members (patients are called members within the system – as they are by definition members of the insurance plan, HMO, Medicare, Medicaid and/or whatever programs that brought them to this case management program). The first sub-tab in the Navigator is the Dashboard screen as shown in Figure 2 to view a summary of the work on hand and easily access the members and cases.



Figure 2: Dashboard Screen in the Navigator Panel

Figure 3 shows the program operating in Japanese - We selected the Worklist Tab to show off the Japanese translation because it contained even more of the beautiful translation work that Laurie Tamura did for the program than the simpler Dashboard in Figure 2.

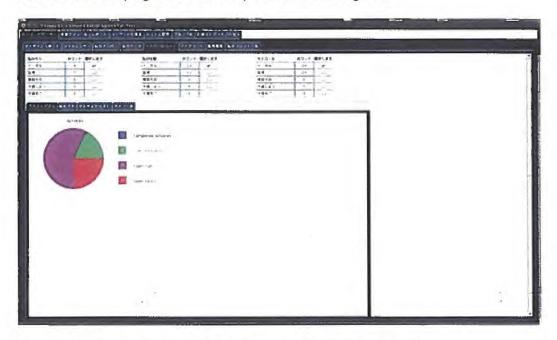
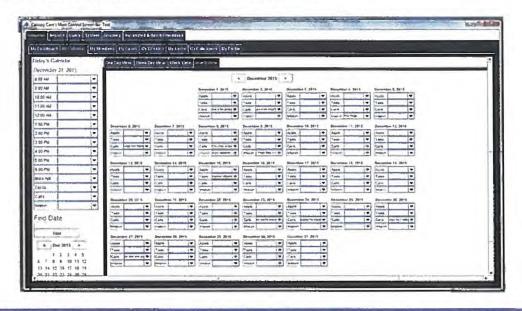


Figure 3: Japanese version of the Worklist Screen in the Navigator Panel

The next tab to the right within the Navigator presents the user's Calendar (Figure 4). This calendar contains all of the medical appointments, calls, tasks, and medical interventions associated with the Members & Cases assigned to a particular user of the system.



#### Figure 4: Calendar

All members assigned to a particular user of the system (for example a Case Manager) are shown in a succinct list in the My Members Tab as shown in Figure 5. These members may or may not have active cases established yet (and could also potentially have more than one case — potentially managed by more than one case manager).

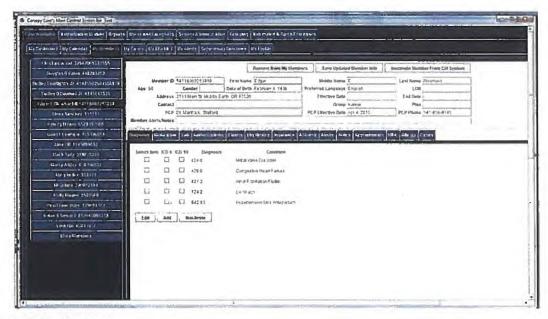


Figure 5: My Members

Each Member (or Case) view starts with the Member History header as shown in Figure 5b – This is the top level synopsis of the Member's demographic and contact information: name, age, gender, primary contact information, primary care physician if applicable, primary insurance, etc.

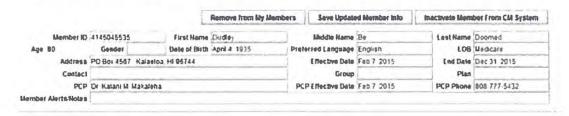


Figure 5b: Member Information

The member history tabs contain diagnosis, medication, lab results, authorizations, claims, eligibility history, current insurance information, addresses, alerts, notes, appointments, health risk assessments (HRA), allergies, and all of this member's cases in the case tab. Everything clinical that a case manager

needs to know when assessing the patient is located right there. Figure 6 shows all of these tabs with the diagnosis tab currently selected - The diagnosis tab in particular shows all known diagnoses for this member, whether they are related to a particular case in case management or not. These tabs are also accessible from the My Cases window - Via the Member History tab (as described later).



Figure 6: Member History Tabs - Diagnosis Tab shown

Figure 7 shows the medication tab, listing all known medications being used by this member.



Figure 7: Member History Tabs - Medication Tab shown

Figure 8 shows the member's lab results tab.



Figure 8: Member History Tabs - Lab Tab shown

Figure 9 shows the authorizations tab - These are the insurance authorizations for procedures, visits to specialists, certain medications, and other occurrences requiring such approval.



Figure 9: Member History Tabs - Authorizations Tab shown

Figure 10 shows the member's claims history tab.



Figure 10: Member History Tabs - Claims Tab shown

Figure 11 shows the eligibility history tab – this is the record of insurance, medicare, Medicaid, and state based program eligibility including past plans, lapses, and other changes in status.



Figure 11: Member History Tabs - Elig History Tab shown

Figure 12 shows the insurance tab depicting all private party insurance.



Figure 12: Member History Tabs – Insurance Tab shown

Figure 13 shows the address tab — this includes past addresses for cross reference purposes and alternate addresses such as vacation homes, relatives who are care givers, and long term care facilities. It also shows effective dates to depict whether a given address is current or past (sometimes past addresses can be useful to verify a patient record is really for a given patient).



Figure 13: Member History Tabs - Address Tab shown

Figure 14 shows the Alerts tab.



Figure 14: Member History Tabs - Alerts Tab shown

Figure 15 shows the member's notes tab.



Figure 15: Member History Tabs - Notes Tab shown

Figure 16 shows the member's appointments tab.



Figure 16: Member History Tabs - Notes Tab shown

Figure 17 shows the Health Risk Assessment or HRA tab - this is one of the key tools utilized in complex case management, and typically one of the first steps in inducting a member into case management is to fill out an overall assessment of that patient's health.



Figure 17: Member History Tabs - HRA Tab shown

Figure 18 shows the member's allergies (tab) - these are subdivided into food, medication, environmental allergies, and a catch-all other category.



Figure 18: Member History Tabs - Allergy Tab shown

Figure 19 shows the cases tab - This tab shows all the cases that this member has in the system -Including past cases and ones not assigned to this particular user.

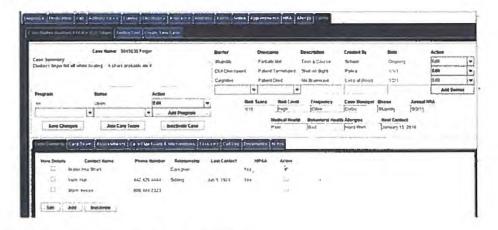


Figure 19: Member History Tabs - Cases Tab shown

Next we discuss the case specific tabs - These are shown within My Members under the member's "Cases" tab or in the higher level "My Cases" tab, which organizes nearly identical information to be viewed case by case rather than at the member level - The distinction being that a particular member might have more than one medical case, and those cases may or may not be managed by the same care team personnel. Viewing a member's cases through "My Members" shows all or that member's cases, whereas viewing the cases through "My Cases" of course only shows my cases, i.e. the ones that a particular user is currently involved in. Figure 20 shows "My Cases". The familiar member information is shown at the top of each case, then case specific information, and finally case specific tabs.



Figure 20: My Cases

Each case starts with a case summary: Global barriers carry across all cases. In the summary the member is set into a user defined program, will show risk scores and risk levels, frequency for patient touches, the case manager and primary medical and behavioral health issues as well as known allergies (close up in Figure 21).

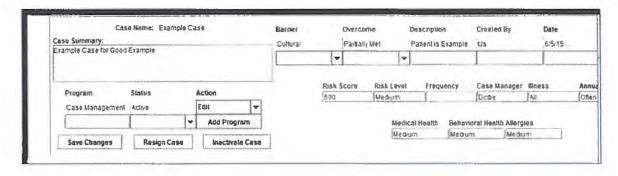


Figure 21: Case Summary

Below the Case Summary is The Case Book – each case has a working case book that consists of Case Contacts, the Care Team, Assessments, Care Plans, Task Lists, Call logs, any and all documentation including health education material sent to the patient. Unlimited case notes and a link to the member history for easy clinical review Figures 22 a - f.



Figure 22a: Case Book Tabs - Case Contacts



Figure 22b: Case Book Tabs – Build Care teams for all avenues within case management. Internal Care teams, Interdisciplinary Care Teams, Specialty team for care coordination.



Figure 22c: Case Book Tabs – All member assessments in one place with side by side views to compare answers as assessments are updated.

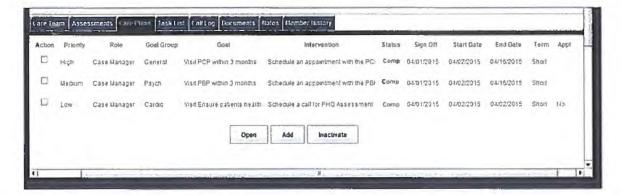


Figure 22d: Case Book Tabs – Care plans have goal groups with specific goals and interventions to assist the member in improving their health and to reach their ultimate care goals. Track and work the goals & interventions in one place. Track necessary patient appointments. Set reminders when needed



Figure 22e: Case Book Tabs – Task list is the check off list of all activity associated to the members' case. Keep the care manager up to date on all that has been done and what remains open.

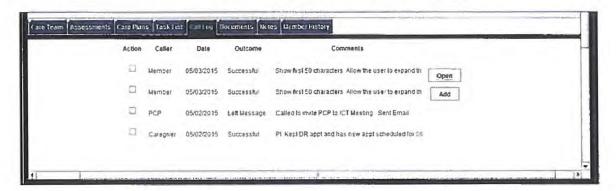


Figure 22f: Case Book Tabs - Track incoming and outgoing calls.



Figure 22g: Case Book Tabs – Within the Documents tab the case manager stores important case documents and letters.

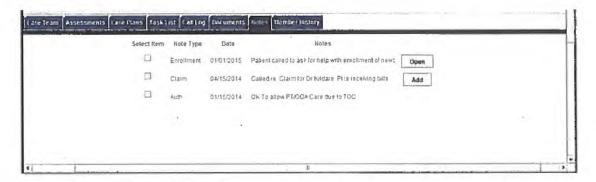


Figure 22h: Case Book Tabs – Take advantage of unlimited note taking capabilities with the ability to categorize notes into user defined buckets and secure each note by note type.

Finally, the last case tab is actually full circle back to "Member History" – the tabs we discussed above in "My Members"

Figure 23 shows the user's work-list - with a quick visual graph of the type of work outstanding.



Figure 23: Work-list

Figure 24 shows the user's alert log.



Figure 24: Alerts

There is an optional supervisory panel (shown in Figure 25) for managerial roles – This allows a supervisor to assign and track the work of their direct reports.



Figure 25: Supervisory Functions

Finally within the overall Navigator tab, the My Profile tab control's the user's own contact information as shown in Figure 26.



Figure 26: My Profile

Figure 27 a – c shows the Authorization Module – This is where the authorizations shown within the member history tabs are actually originated, processed, and approved.

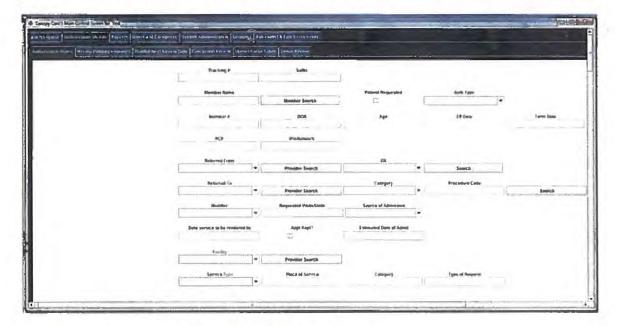


Figure 27a: Authorization Module - Authorization Intake

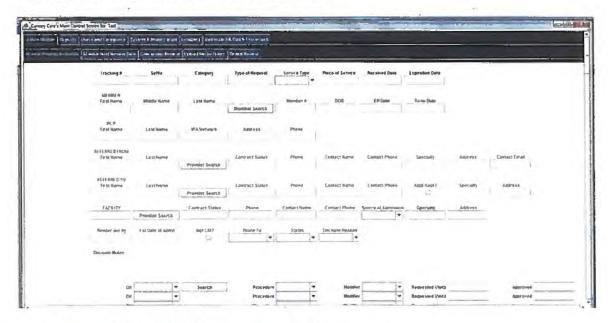


Figure 27b: Authorization Module - Review Pending Requests



Figure 27b: Authorization Module - Concurrent Review

Figure 28 a – c shows the reporting functions.



Figure 28a: Reports - Regulatory Reporting - Patient Chart

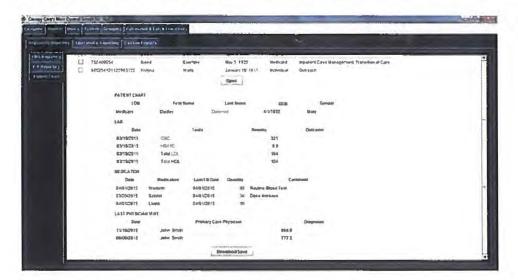


Figure 28b: Reports - Regulatory Reporting - Patient Chart Continued

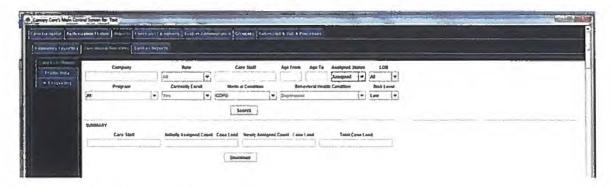


Figure 28c: Reports - Operational Reporting

Figure 29 shows the user and caregiver management functions – Basically how to add new users and providers to the system.



Figure 29: Users and Caregivers

Figure 30 shows the System Administration tab (and the Care Planning) sub-tab.



Figure 30: System Administration

Figure 31 shows the assessment manager (accessed from System Administration) – this is where (blank – i.e. the original forms) HRA's and other assessments are developed for all members.

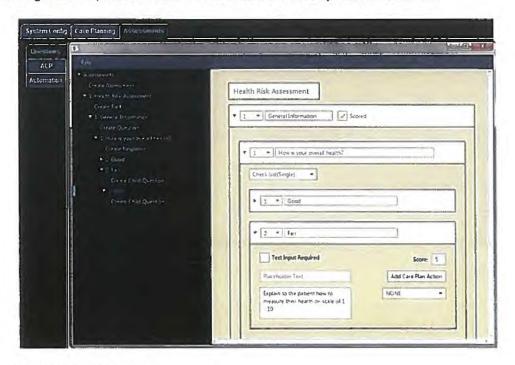


Figure 31: Assessment Manager

Figure 32 shows the program's group management tool.

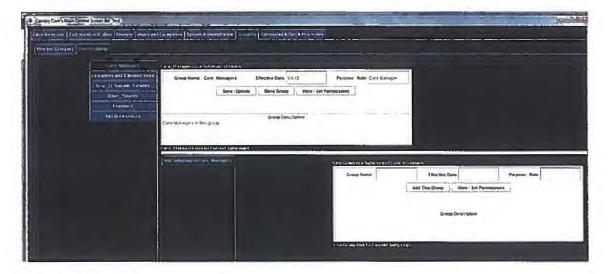


Figure 32: Grouping

Figure 34 shows the beginnings of our batch processing capabilities.

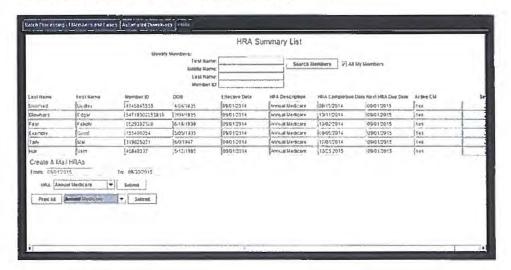


Figure 34: Batch Processing

As part of the batch processing capability, we have also completed the integration between Plexis's flagship product Quantum Choice, and our Quantum Care program as shown in Figure 35.

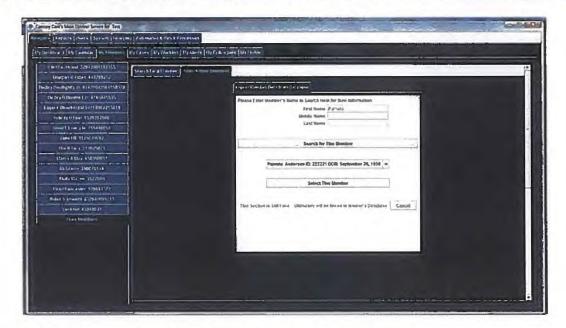


Figure 35: Quantum Care Downloading Patient Data from Quantum Choice

# **Marketing and Business Development Progress**

Ned Davis and our consultant Dottie Robinson presented the new software at the Plexis annual users' conference for potential customer interest. We received 8 inquiries about our software; we got two call-backs, and proceeded to give two full software demos. One of those companies became a beta site. Figure 36 shows Ned at our booth at the Plexis conference.



Figure 36: Presenting our software at a conference

The software has now been deployed with 3 customers in Beta. An additional 4 companies are currently in negotiations with us. Development continues with new advances and additions to the program being

delivered on a roughly bi-weekly basis. We continue to demonstrate it to new customers, presented it at a software conference, and are generally receiving a high level of interest in the product.

We will also eventually re-bid our software solution to the Bahamas for their national healthcare system (the first RFQ was withdrawn, and a new one is being issued – due to issues relatively unrelated to us). This is seen as a good opportunity to make our price more competitive.

Commercial applications are also numerous, and with ~\$3T spent on healthcare in the United States, the rationales presented above for this analysis are even stronger, and the payoffs even larger.

# Goals and objectives:

The initial objective of the joint venture was to create the next generation case management software for healthcare payers. The vast experience of Plexis employees and customers in the healthcare payer industry served as the springboard for the innovative design of QCM.

Medical Case Management refers to the planning and coordination of health care services appropriate to achieve the goal of medical rehabilitation. Medical case management includes care assessment, including personal interviews with injured employees, and assistance in developing, implementing and coordinating a medical care plan with health care providers, as well as the employee and his/her family and evaluation of treatment results.

Medical case management requires the evaluation of a medical condition, developing and implementing a plan of care, coordinating medical resources, communicating healthcare needs to the individual, monitoring an individual's progress and promoting cost-effective care.

Case Management is also used in a managed care environment to assist healthcare providers with a complete picture of the care the patient is receiving and to ensure cost efficiencies by coordinating care between all providers.

The market for Medical Case Management software is growing rapidly across the US, largely due to the implementation of the Affordable Care Act, and the return of managed care models of healthcare delivery.

The market needs a new innovative solution that helps nurses, doctors and patients get access to information and provide them with guidelines for improving healthcare delivery. Plexis has designed such a solution, and is ready to begin the programming and completion of the product.

Maui Innovation Group has led the development of QCM by providing coding services, architectural implementation, and quality assurance, and the QCM joint venture will continue to be run from Maui County at the direction of Dr. Ned Davis.

The long term goal is to establish a full service organization that will do ongoing software development on Maui for this project and others as they arise. We will also establish a technical support department to assist our clients in production, and will hire subject matter experts to assist with the installation and implementation of medical management programs.

Maui Innovation Group will also continue to bid on other high tech projects that will create new jobs and opportunities for local technical and professional staff.

QCM is a thriving joint venture located on the island of Maui that will hire local talent and will work with the community to create living wage professional and technical jobs. Maui Innovation Group will work with the local schools to establish job training programs and educational opportunities for local youth.

We will market the product worldwide through various established channels already in place at Plexis.

### Statement of work

Maui Innovation Group and Plexis have undertaken the following tasks comprising our statement of work in order to successfully complete this project:

- 1) Evaluate functional and technical designs and modify as necessary
- 2) Create prototype version of QCM program
- 3) Use prototype to market and pre-sell QCM software to Plexis customers
- 4) Software Integration with Plexis and other 3d party codes such as EMR
- 5) Create and Test Alpha Version of QCM Software
- 6) Create and Test Beta Version of QCM Software
- 7) Integration Testing
- 8) QCM Product Release

#### Schedule

Figure 37 shows the schedule for the work performed under the EDRF contract.

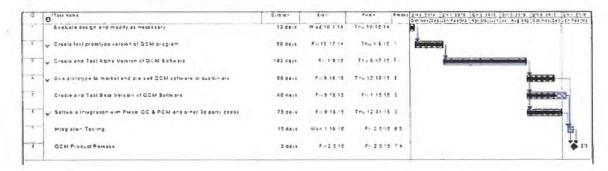


Figure 37: Schedule

# Detailed description of work performed

Maui Innovation Group and Plexis have completed the following tasks enumerated in our statement of work in order to successfully complete this project:

#### C.1 Evaluate design and modify as necessary

A preliminary design for the QCM product already exists – Maui Innovation Group and Plexis will evaluate this design and decide whether it is complete or modify it accordingly (essentially complete – small improvements ongoing).

#### C.2 Create prototype version of QCM program

Maui Innovation Group will create a prototype version of the QCM product suitable to demonstrations to Plexis' customers. This prototype will be used as a basis for the later development versions and as a marketing tool to pre-sell the product (Complete).

#### C.3 Use prototype to market and pre-sell QCM software to customers

Plexis will use the prototype version of the QCM product to demonstrate the product to Plexis' customer for marketing purposes and to pre-sell the QCM product.

#### C.4 Software Integration with Plexis and other 3d party codes such as EMR

Integration between the QCM program and Plexis existing software including Quantum Choice <sup>tm</sup> is crucial for sales to Plexis' existing customers. Utility (and hence value) of the product will be enhanced, and the potential customer base will also be broadened by ensuring broader interoperability with other common medical software platforms such as EMR packages (some progress, but needs more).

#### C.5 Create and Test Alpha Version of QCM Software

The alpha version of the software will be completed and tested based on feedback and lessons learned from the prototype version (Complete).

#### C.6 Create and Test Beta Version of OCM Software

Next, the beta version of the software will be completed, essentially incorporating full product functionality, and it will be tested to a much more rigorous standard in order to eliminate remaining issues within the code (to commence soon).

#### C.7 Integration Testing

Integration testing will be performed by engineers from Maui Innovation Group and Plexis in order to insure compatibility and interoperability with Plexis and other companies' existing product lines (to commence after beta).

C.8 QCM Product Release

Upon completion of the previously described tasks, the software will be released to the customers (to commence after beta and testing).

# **Budget Progress**

Maui Innovation Group maintains 3 separate business bank accounts at American Savings Bank:

- 1) A central company account from which payroll, taxes, benefits, and expenses such as office insurance and rent are paid and to which payments for labor & overhead are deposited
- 2) A Plexis specific account into which Plexis electronically transfers funds for this project, and from which Maui Innovation Group bills and deducts expenses such as labor with fringe & overhead, and Plexis specific expenses such as travel and lodging for project business
- 3) An EDRF specific account to which we deposited all of our EDRF grant checks and will deposit, and from which we deducted the EDRF portion of labor, overhead, and fringe in accordance with the terms of our grant.

To date, Plexis has directly contributed \$991,000 to their account in this joint venture, and given additional support from their staff – this is far in excess of the \$200,000 cash support promised in the original proposal because some work commenced prior to the EDRF grant being made, and additional features have been added to the software in order to bid larger customers such as national healthcare plans. Currently ~\$58,000 remains in the separate Plexis account at American Savings Bank, and Plexis has committed to replenishing those funds further as needed and until customer revenues commence and can carry us forward – We are well positioned to see this through and become very successful.

All of the EDRF grant checks – the first two of \$80,000 each, and the final check for \$15,000 – Totaling \$175,000 were deposited to the EDRF project account, and used for labor on this project as described in our proposal and contract.

# **Current Employee Count**

Our headcount is 5 FTE's better than promised in our EDRF proposal – Specifically our current employee roster is as follows:

- 1) Edward P "Ned" Davis Founder & CEO
- 2) Laurie Tamura Director of Operations
- 3) Dianne Butay Senior Engineer
- 4) Lucas McKeon Software Engineer
- 5) Libby Riter Admin

All employees are offered Kaiser health insurance fully paid by our company.

## **Facilities**

Maui Innovation Group's primary office and lab are located in the Maui Research and Technology Park in Kihei Hawaii, which was created to house innovative high tech businesses such as ours. The building where our office is now located, the Maui Research and Technology Center MRTC (shown in Figure 38) is located at 590 Lipoa Parkway. We have a regular commercial lease on an approximately 700 square foot office and lab as shown in Figure 39. Maui Innovation Group's facilities where the work was performed meet all applicable environmental laws and regulations of federal, State of Hawaii, and local Governments for, but not limited to: airborne emissions, waterborne effluents, external radiation levels, outdoor noise, solid and bulk waste disposal practices, and handling and storage of toxic and hazardous materials.



Figure 38: The MRTC Building



Figure 39: Interior of Maui Innovation Group's office and lab

Our office shown in Figure 39 contains the requisite bulletin board displaying all our business licenses, occupancy permit, minimum wages (State & Federal), insurance policies, unemployment benefits, etc. present in most every business these days -- We possess all applicable property and liability insurance, TDI, Workman's Comp, and comply with all relevant laws, rules and regulations of the Federal Government, State of Hawaii, and Maui County.

Figure 40 shows our new machine shop.



Figure 40: Interior of Maui Innovation Group's machine shop

#### Conclusions

We have developed the Quantum Care software project, assembled our team of engineers, presented at the Plexis annual users' conference, and continue to bid on opportunities. We received multiple inquiries about our software and have acquired our first three beta site customers.

We have achieved the hiring goals laid forth in our proposal, with a current headcount of 5 FTE's, and are located in the Kihei tech park with all applicable insurances, licenses, and certifications in good-standing. We are likely to expand further as soon as these leads come to fruition.

We have more than achieved the financial goals laid out in our proposal by bringing \$991,000 of additional matching investment in Maui County above and beyond the \$175k EDRF Grant from the county and larger than the originally committed \$400k – This has been a win – win – win situation for all involved: Plexis, Maui Innovation Group, and the County of Maui – Over 3x return on investment already – just in software development work alone (almost all to the local economy in salaries, benefits, and overhead such as office rent and supplies right here in Maui County), and a path to millions of dollars of recurring revenue in the future.

Furthermore, by moving this software development work to Maui instead of offshore, Maui Innovation Group has been able to create a much more enduring business presence on Maui with regular employees, an office, and payroll & benefits including health insurance, workman's comp, TDI, etc. – All of the trappings of a full-fledged employer on island. Furthermore, we have leveraged this business to bid two Federal SBIR programs – one directly related to this software project and one in a new area that we hope to expand into.

We are on schedule and on budget for success.

#### **Future Work**

We will continue to build out our case management tool, continue our marketing efforts, and continue to develop and improve the capabilities of our software, as well as add new features such as authorizations and referrals. We will re-bid our software solution to the Bahamas for their national healthcare system (the first RFQ was withdrawn, and a new one is being issued).