ROVISYS
Automation & Information Solutions

R Ales Consulting

Allen Aircraft ATP Automation

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csia
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CERTIFIED

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Proposal Revision History

Rev	Date	Description
A	February 7, 2024	Initial Submittal
B	February 14, 2024	Updated per review call: • Converted to Fixed Price • Converted to Waterfall instead of Agile methodology • Clarified customer ownership of deliverables • Added scope for one day onsite training on delivered codebase / LabVIEW familiarization • Clarification that 1 ATP report format is included in proposal • Added assumption to section 3.6 that DAQ equipment will have LabVIEW drivers available

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NOTICE

This document contains RoviSys proprietary information and has been provided for the sole purpose of evaluation. Acceptance of the document constitutes agreement that the recipient shall not disclose RoviSys proprietary information to any third party in whole or in part or transmit any documents or copies thereof in whole or in part to any third party without the expressed written consent of The RoviSys Company.

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1   RoviSys Background

1.1   Our Mission

The RoviSys mission is: **Provide our clients with automation and information integration solutions using the best technologies and platforms, regardless of who makes them, giving our clients choices.** We provide uncompromising focus on customer satisfaction providing the best engineered process control solutions to meet your needs.

1.2   Background

RoviSys was formed in April 1989 to provide timely, cost effective, reliable, and modern solutions to a wide range of systems applications using the best technology. This primary philosophy and our focus on customer satisfaction enables and drives our continuous growth to over 1,000 engineers at multiple locations in North America, Asia, and Europe.

RoviSys is an independent integrator offering broad range expertise in current and legacy technologies applied across a wide variety of markets. We are focused on providing solutions that are a best fit for our customers giving them the freedom to choose solutions with flexibility to integrate the best in class technologies for each of their system applications.

The most valuable asset at RoviSys is our staff. One of our greatest strengths is a diverse employee knowledge base that spans technologies and industries. Each of our employees has developed application experience in many industries we serve. Considerable effort is committed to hiring, developing, and retaining personnel. Our personnel retention is among the best in the industry benefiting our customers by maintaining project team continuity.

RoviSys draws across all functions and employee skill sets to properly execute complex projects. In addition to our diverse technical skill sets, we employ Registered Professional Engineers (PE) as well as Project Management Professionals (PMP).

1.3   Summary

As an independent automation organization and an approved system integrator for a wide range of control systems and MES platforms, RoviSys is well suited to meet the diverse needs of R Ales Consulting. Our independence combined with our experience on multi-faceted projects results in efficiency and quality in execution.

When clients are asked why they return to RoviSys project after project, they indicate that it is RoviSys' ability to manage, deliver, and complete projects. Additionally, the integrity with which we execute their projects and the ongoing focus on customer satisfaction convinces them to look no further for their system integration and support needs whatever the industry.

2   Discrete Manufacturing Services

Today's discrete manufacturers are faced with an increasingly diverse, complex and competitive market. Rising costs in material, labor and energy compound these challenges and drive discrete manufacturers towards solutions that increase production, reduce waste and allow for accurate tracking and storage of material throughout the manufacturing site.

RoviSys delivers proven solutions and services to discrete manufacturers by leveraging our vendor independence. This independence allows us to provide the best solutions, unique to you. We understand the critical need to assess/connect systems and are committed to delivering measurable results and clear return on investment.

Project execution within various discrete manufacturing industries such as transportation, aerospace, defense, heavy industry, and electronics has enhanced our expertise in varying disciplines:

Motion & Robotics

- Coordinated Motion
- Robot Interfacing/Integration
- Material Handling
- OEM Integration
- Supervisory Systems

Vision & Inspection

- Measurement & Multi-dimensional Inspection
- ICR/OCR
- Barcode Reading
- RFID
- Laser Marking

Information

- Product Genealogy
- MES & SCADA
- KPI Dashboards
- Reporting & Analytics
- OT/IT Bridge

Test & Measurement

- Electrical Test
- Device Characterization
- Thermal Performance
- Firmware Load/Final Configuration

Our understanding of the various levels of the manufacturing supply chain allows us to work hand in hand with customers to develop effective automation solutions for a rapid return on investment. Our robust staff can develop solutions to connect critical plant floor data to new or existing business/ERP systems. We also provide solutions to deliver data from business systems to the plant floor in terms of work orders, notifications, and/or KPI metrics.

RoviSys' extensive process control and automation knowledge and integration experience provide control system integration enhancements and improved manufacturing execution when applied to your process. These services help you realize greater value from your investment by detecting process problems and issues and identifying and implementing performance improvements.

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3   Project Proposal

3.1   Project Overview

R Ales Consulting has requested that RoviSys provide a proposal to provide LabVIEW software integration service for their client, Allen Aircraft in Ravenna, OH. This proposal is based on the Request for Proposal meeting held onsite 1-30-2024 with R Ales Consulting, and subsequent communications.
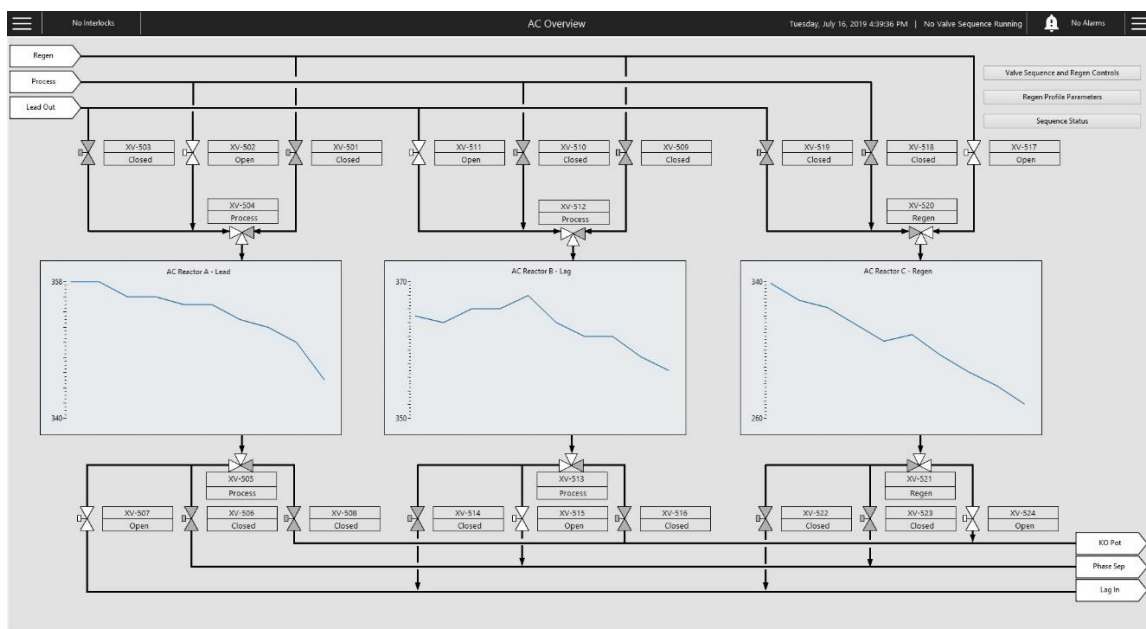
R Ales Consulting is working with Allen Aircraft to provide modernization services for their Aircraft Oil Level Sensor Acceptance Test Procedure (OLS ATP). The ATP is currently performed using a system that includes an oil tank that can be filled and drained, a Keyence level sensor to return precise oil level, and a manual ohmmeter to check the OLS resistance at various levels (test points).

The current project will automate portions of the test process and provide automatic data collection for the resistance readings.

At the conclusion of the project, RoviSys will provide hands-on familiarity training to key personnel onsite at Allen Aircraft.

3.2   RoviSys Application Framework

RoviSys executes NI LabVIEW programming projects using our internal RoviSys Application Framework. This framework follows current NI coding standards and is intended to provide end users with a clean, modern user interface that is easy to extend in the future to add additional functionality. Complete source code for the framework is included in customer deliverables to allow end-user to modify and extend the code indefinitely.

An example from a LabVIEW program developed in the RoviSys Application Framework.

3.3   Basis for Proposal

The information in the following sections reflects the estimated quantities used as the basis for this proposal. These quantities are derived from the data provided and are utilized for estimation purposes only. Final field quantities will be determined during the design portion of this control system project.

This Request for Proposal included the following documents:

Document Name/Number	Date	Document Title/Description
Elevate OLS ATP Requirements 2-1-24 (003).docx	2/1/24	Requirements for automated test system
ATP 8005571_05A.pdf	9/20	ATP procedure document

3.4   Project Scope Responsibilities

The initial phase of the project is a collaboration between RoviSys and R Ales consulting. The following table highlights the breakdown of scope responsibilities:

Item	Responsibility
Project Management	RoviSys
Requirements Definition	R Ales / Allen Aircraft
Software Design Specification	RoviSys
Electrical Drawings	R Ales / Allen Aircraft
Electrical Panel / Electrical Modifications	R Ales / Allen Aircraft
Mechanical Modifications	R Ales / Allen Aircraft
Application Programming	RoviSys
Onsite Installation of equipment	R Ales / Allen Aircraft
Onsite Installation of Software	RoviSys
Site Acceptance Test	RoviSys / R Ales / Allen Aircraft

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3.5   Services Scope

RoviSys will provide the following scope items to meet the project requirements.

3.5.1   Software Design Specification

RoviSys will draft a Software Design Specification document to detail the implementation of the requirements included in the proposal.

The following features are included in the proposal:

- Creation of initial project in LabVIEW using RoviSys Application Framework
- Password-protection for admin screens
- Data collection from DATAQ USB DAQ device for 8 data channels (corresponding to 4 DUTs)
  - Including user-configurable linear scaling function for each channel
- Data collection from Keyence Level Sensor
  - Including user-configurable linear scaling function
- Control of oil pump via h-bridge control PCB
- Manual control of oil level via onscreen buttons to increase/decrease level
- Automatic control of oil level via setpoint
- Loading of test parameters via manually-entered part number
- Creation of 1 test sequence to allow one-button automatic test of OLS with configurable parameters for oil level setpoints, test setpoints, and emergency stop / safe state.
- Data Saving to flat files (CSV format, viewable in Excel)
- Creation of 1 ATP report file (1 format)

3.5.2   Application Programming (LabVIEW)

The application will be programmed in LabVIEW 2023 or current version.

RoviSys will create a compiled executable of the application that will run using the free LabVIEW runtime license. Development software is not required to run the compiled application. RoviSys will create an installer package that installs the application and the runtime environment on Windows 11 PCs.

3.5.3   Onsite Services

3.5.3.1   Software Installation

RoviSys will provide the following installation services:

- Software configuration loading

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3.5.3.2   Loop Checks

RoviSys will assist with Loop Checks on the system to determine if hardware has been installed correctly by R Ales Consulting or others. Functions in the application will be used to read/write each IO point.

3.5.3.3   Commissioning

After loop checks are complete, RoviSys will dry run the SAT per the approved SAT plan. This activity will test the functionality of the system on the actual equipment. During this time, any identified issue will be identified and resolved prior to the execution of the official SAT.

3.5.3.4   Site Acceptance Test (SAT)

After commissioning is complete, RoviSys will execute the SAT per the approved SAT plan. The SAT formally tests the functionality of the system on the actual equipment. Completion of the SAT Test Plan and resolution of issues identified will serve as a project milestone to signify final system acceptance by R Ales Consulting.

3.5.3.5   Application Familiarity Training

RoviSys will provide one day of onsite familiarity training. Training provided will be conducted hands-on with the equipment. Project documentation (Software Design Specification) will be utilized as training materials. Proposal does not include training manuals, classroom activities, or other materials developed specifically for training.

The following items will be covered in training:

- Application Architecture
- Programming inside the RoviSys Application Framework (LabVIEW)
  - IO Configuration
  - Data Saving
  - Test Sequence Editing
  - IO Modification
- Hands-on demonstration / assistance adding or editing a minor feature suggested by end user to help user gain proficiency with the framework. Examples might include:
  - Adding an additional DAQ channel to the programming
  - Modifying the data saving routine to include additional information in the data file
  - Adding a step to the test sequence

Training will be most effective for someone familiar with LabVIEW, specifically with the on-demand NI training courses LabVIEW Core 1/2/3. RoviSys will recommend training courses to end user.

3.5.4   Project Closeout

RoviSys will assemble a turn-over package for R Ales Consulting once the project has been successfully delivered. The project turnover package will include electronic copies of the last transmitted version of every document supplied by RoviSys. The project turnover package will also include the as-installed software configuration files and source code.

The Project Closeout Activities will include a lessons-learned meeting attended by the appropriate RoviSys and R Ales Consulting project and management personnel.

3.6   RoviSys Assumptions

This proposal is based upon the following assumptions:

1. This proposal is based on documentation referenced in the Basis for Proposal section. Quantities in that section are derived from the RFP package and other information provided by R Ales Consulting.

2. Field devices including instrumentation, transmitters, sensors, switches or other networking interfaces, network cables, all field wiring, VFDs, motor starters and drives will be procured and installed by others.

3. Physical installation of control system hardware, wiring, instrumentation, field panels, and HMIs will be performed by others.

4. No purchases are included. PC and peripherals needed to run the test application will be provided by others.

5. Project is offered on a fixed-price basis based on the requirements provided during RFQ walkthrough and subsequence communications.

6. Delays in installed equipment, or issues with equipment not provided by or installed by RoviSys could result in the need for additional, out-of-scope onsite support. RoviSys will coordinate with R Ales Consulting to plan onsite activities to minimize this risk.

7. DAQ hardware selected and installed by R Ales Consulting will have LabVIEW drivers available for the current version of LabVIEW. R Ales Consulting will provide one of these devices to RoviSys for testing during application development.

4   Pricing

RoviSys has estimated, in good faith, the effort and cost of this project. The cost estimate is based on the information provided by P24RALES01b and on our experience in defining and implementing system projects of similar scope and complexity.

- This project will be invoiced in a **Fixed-Price** fashion.
- **Net 30 Invoices will be issued the first week of each month**.

4.1   Pricing Summary

Scope Item	Price
Engineering Services - Fixed	$33,110
Proposal Total	**$33,110**

4.2   Shipping

Shipping will be prepaid and added to the price.

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5   Bill of Materials

The table below reflects the anticipated hardware/software included within this proposal. Final quantities and types of hardware/software will be determined during the engineering design phase of this project.

No purchases are included. This table is intentionally omitted.

6   Terms and Conditions

This proposal is valid for 90 days.

See standard RoviSys Terms and Conditions, dated June 1, 2018, on the following pages.

If RoviSys is selected for this work please send the purchase order to orders@rovisys.com

RoviSys Terms and Conditions

These Standard Terms and Conditions ("Terms") apply to the foregoing RoviSys Proposal ("Proposal") (the Terms and Proposal together referred to as the "Agreement"). The Agreement is made between The RoviSys Company ("RoviSys") and the purchaser named in the Proposal ("Purchaser").

1. Acceptance of Terms. Purchaser may accept this Proposal by signing the Proposal signature page or by issuing a purchase order. Acceptance of the Proposal is expressly limited to and conditioned upon exclusive acceptance of these Terms. RoviSys objects to any modification or alteration of these Terms in any subsequent document, including provisions included on Purchaser's purchase order, and no such addition or modification will be binding upon RoviSys unless agreed in a writing signed by a duly authorized RoviSys representative.

2. The Work. The Proposal may include delivery of goods, including hardware, software, and equipment ("Products") and the provision of services performed by RoviSys ("Services") (Products and Services together are referred to as the "Work").

3. Payment Terms. All payments are due in U.S. Dollars. Terms are thirty (30) days net from date of invoice unless otherwise indicated in the Proposal. Overdue amounts will be assessed a late charge of 1.5% per month on the unpaid balance (18% per annum). Accounts more than sixty (60) days overdue may be assigned to outside collection agencies, and Purchaser agrees to be responsible for all charges associated with such collection procedures.

4. Delivery of Goods. Delivery of goods are quoted FCA RoviSys. Delivery dates set forth in the Proposal are estimated as accurately as conditions will permit based on RoviSys' current knowledge. RoviSys shall not be responsible for damages associated with delivery delays.

5. Taxes. RoviSys prices do not include sales, use, VAT, or similar taxes. All applicable taxes must be paid by Purchaser, unless Purchaser has provided RoviSys with a tax-exempt certificate acceptable to the appropriate taxing authorities.

6. Termination. Purchaser may cancel this Agreement by 15 days' notice to RoviSys. As a condition of cancellation, if RoviSys has not breached this Agreement, RoviSys will be entitled to payment for all Work performed through the effective date of cancellation and all reasonable costs and expenses incurred by RoviSys in performing or cancelling the Work, based on the price set forth in the Proposal.

7. Acceptance of the Work. Purchaser's acceptance of the Work will be in accordance with the acceptance procedures set forth in the Proposal. If the Proposal does not contain express acceptance procedures, Purchaser will be deemed to have inspected and accepted the Work thirty (30) days after delivery of the Work, unless RoviSys receives earlier written notice that the Work fails to conform to the specification set forth in this Agreement.

8. Force Majeure. Neither party will be responsible for delay or damages caused by conditions arising outside the control of the parties, including terrorism, war, and

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natural disasters ("Force Majeure Events"). Failure to make payments and financial hardship are not considered Force Majeure Events.

9. <u>Limited Warranty.</u> RoviSys warrants that the Services will comply with the final specifications established under the Agreement for a period of one year after acceptance by the Purchaser. ROVISYS'S WARRANTY OBLIGATIONS SHALL NOT EXTEND TO ANY EQUIPMENT OR SOFTWARE MANUFACTURED OR DEVELOPED BY THIRD PARTIES ("THIRD PARTY MATERIAL") THAT ROVISYS DELIVERS WITH THE PRODUCTS. ROVISYS IS PURCHASING AND DELIVERING THE THIRD PARTY MATERIAL (INCLUDING SOFTWARE DEVELOPED BY THIRD PARTIES) ON BEHALF OF PURCHASER AND FOR THE CONVENIENCE OF PURCHASER, AND ROVISYS DOES NOT PROVIDE ANY INDEPENDENT WARRANTY WITH REGARD TO THE THIRD PARTY MATERIAL. ROVISYS HEREBY DISCLAIMS ANY OTHER WARRANTY, EXPRESS OR IMPLIED, WITH REGARD TO THE THIRD PARTY MATERIAL, INCLUDING THE IMPLIED WARRANTIES OF TITLE, NONINFRINGEMENT, MERCHANTABILITY, AND FITNESS FOR A PARTICULAR PURPOSE. If RoviSys receives a warranty from a third party manufacturer, distributor, or developer covering any Third Party Material, RoviSys shall assign or pass through such warranty to Purchaser, and shall cooperate with Purchaser in securing and enforcing Purchaser's rights under any such warranty.

10. <u>Limitation of Liability.</u> In no event shall any party to this Agreement be liable to any other party for incidental, consequential, or punitive damages, including lost profits or lost business opportunities. In no event shall any party's liability to the other exceed the lesser of (i) the price of this Agreement or (ii) One Million Dollars ($1,000,000). The limitations set forth in this paragraph shall apply regardless of the cause of action, whether in contract, tort, warranty, indemnity, or otherwise.

11. <u>Indemnification.</u> The parties intend to indemnify each other against liability for losses associated with third party claims on a comparative negligence basis. Each party to this Agreement agrees to defend and indemnify the other parties named in this Agreement from losses and liabilities resulting from third-party claims, to the extent such losses and liabilities are caused by the negligent act or omission of the indemnifying party.

12. <u>RoviSys Tools and Templates.</u> RoviSys has developed, improved, or licensed various proprietary materials, including (1) software development tools, know-how, methodologies, processes, technologies, and algorithms, which RoviSys uses in performing RoviSys' obligations pursuant to this Agreement, but which are not delivered with the deliverables ("RoviSys Tools"); and (2) generic products or formats which constitute the basis of the templates, modules, forms, and graphics, which are delivered with the deliverables ("RoviSys Templates"). Notwithstanding any other provision in any other agreement between the parties, RoviSys retains its ownership and rights in the RoviSys Tools, RoviSys Templates, and all improvements thereto, including any improvements that may be developed in the course of performing RoviSys' obligations under this Agreement. In no case shall the RoviSys Tools, RoviSys Templates, or any improvements thereto contain or be construed to contain any information specific to the Purchaser, including the Purchaser's marks, specifications, or confidential or proprietary information. RoviSys grants the Purchaser a nonexclusive, perpetual, worldwide, royalty-free license to reproduce, modify, and use the RoviSys Templates, as delivered with the Work.

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13. <u>No Solicitation of Employees.</u> During the term of this Agreement and a period of 12 months thereafter, Purchaser shall not hire, contract for, or otherwise engage the services of any person who provided any services in connection with this Agreement as an employee of RoviSys. If Purchaser violates this paragraph, in addition to all other rights and remedies RoviSys may have under this Agreement, at law or in equity, RoviSys shall be entitled to (i) immediate and permanent injunctive relief (without no requirement to post bond), and (ii) as part of its damages, RoviSys' reasonable legal costs and expenses for bringing and maintaining any such action.

14. <u>Arbitration.</u> Except for disputes seeking injunctive relief or involving claims exceeding one million dollars ($1,000,000), any dispute arising out of or related to this Agreement shall be resolved by binding arbitration, conducted by the American Arbitration Association using its Commercial Arbitration Rules, in Cleveland, Ohio. Purchaser and RoviSys agree to each pay half of the arbitration fees, including the arbitrator fees. Any decision rendered by the arbitrators shall be binding upon the parties and may be filed in any court of competent jurisdiction.

15. <u>Choice of Law; Venue.</u> This transaction shall be deemed to have been made and entered into in the State of Ohio, and shall be construed and enforced in accordance with Ohio law, without regard to its conflict of laws rules. Subject to the arbitration provision set forth in these Terms, any disputes or claims related to this Agreement shall be heard in state court or federal court in Cuyahoga County, Ohio.

16. <u>Entire Agreement.</u> These Terms express the entire and final agreement between RoviSys and Purchaser regarding the subject matter addressed herein, and supersede any prior written or verbal agreement. These Terms are binding upon RoviSys and Purchaser and their respective successors and assigns.

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DATA SECURITY ADDENDUM

Notwithstanding anything to the contrary in the Agreement or any Work Order, Purchase Order, Statement of Work, or similar document (collectively, the "Agreement"):

1. RoviSys retains, archives, and stores certain data, including but not limited to names, email addresses, and similar identifying (but not sensitive) contact information for companies or individuals ("Personal Data") and certain data and information specific to the Work ("Project Data"), which cannot reasonably be deleted from RoviSys's archives and backups (collectively, the "Archived Data"). RoviSys retains, and must be able to retain, the Archived Data for the purpose of performing its obligations under the Agreement. Further, RoviSys has a legitimate business need to back up and archive the Archived Data. Therefore, RoviSys may delete Project Data from active systems if required by the Agreement or compelled by law, but RoviSys cannot delete Personal Data from its active systems nor can RoviSys completely delete the Archived Data from its archives and backups.

2. Any reference to "reasonable" and/or "appropriate" measures, protections, policies, methods, or systems required of RoviSys shall mean "reasonable and/or appropriate for RoviSys's industry."

3. If the Agreement permits an audit of the systems and/or facilities of RoviSys, such audit shall comply with the following requirements:

3.a. Except in the case of a confirmed breach involving Customer's data (in which case RoviSys shall receive no less than 24 hours' advance notice), RoviSys must receive no less than 72 hours' advance written notice prior to the commencement of any audit;

3.b. Except in the case of a confirmed breach involving Customer's data, there shall be only one audit conducted in any 365-day period;

3.c. The audit shall not last longer than one (1) day;

3.d. The audit shall be conducted during normal business hours;

3.e. The audit shall not unreasonably interrupt or interfere with the business operations of RoviSys; and

3.f. The audit shall be conducted at the sole cost and expense of the auditing party.

3.g. Prior to any such audit, the auditing party and/or third-party auditor shall execute and deliver to RoviSys an NDA to protect and limit the use of any information discovered during any such audit.

4. If the Agreement requires RoviSys to correct or remediate any data security or data privacy deficiencies or other failures to comply with security measures imposed by the Agreement (collectively, "Deficiencies"), RoviSys shall only correct or remediate those mutually agreed Deficiencies.

5. The limitation(s) on liability and the limitations on RoviSys's indemnification obligations set forth in the Agreement shall apply to any data security, data privacy, or similar obligations referenced in or contemplated by this Addendum.

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