

MAY | 2024



STANDARD OPERATING PROCEDURES (SOP)

Commissioned by ELECTRI International. Prepared by Hala Nassereddine, NCM Consulting LLC

Acknowledgements

Many individuals and their firms worked collaboratively and intensively to produce the data and recommendations for this study. ELECTRI International and the National Electrical Contractors Association acknowledge, with sincere appreciation, their dedication to the electrical construction industry.

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This ELECTRI International research project has been conducted under the auspices of the Research Center.

Center for  **RESEARCH**

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About the Author



Hala Nassereddine, Ph.D. is President and CEO of NCM Consulting, LLC. She is also an assistant professor in Construction Engineering and Project Management, a program within the Department of Civil Engineering at the University of Kentucky. Dr. Nassereddine was chosen for the Russell J Alessi ELECTRI International 2020 Early Career Award for her proposed project on Allocating and Leveraging BIM Efforts for Electrical Contractors. Her research initiatives include identifying potential disruptors and roadblocks that must be surmounted to transform the construction industry, understanding supply chain and materials management, developing frameworks that promote innovation, supporting digital transformation, proposing methodologies for integrating Construction 4.0 technologies, and investigating strategies to leverage Lean Construction practices.

'Inconsistency breeds inefficiency' is a fundamental principle that resonates across various industries, including the electrical construction industry, emphasizing the importance of standardized processes. Standard Operating Procedures (SOPs) can help define their business and success. SOPs set up the project for success by establishing consistency, standardization, teamwork, and a shared vision for how projects are executed. With the shortage of workers and the generation changes, SOPs are becoming critical for the success of the project (productivity, cost, schedule, quality, and communication, among others), transferring skills, and the overall continuity of contractors.

In this project, we developed SOPs for **five essential activities**:

- **Daily Logs:** Daily Logs serve as a pivotal component of daily operations on a construction project, providing a comprehensive record of activities, resources, and events.
- **Procurement:** Efficient procurement processes are crucial for ensuring a steady supply of materials and services to a construction project.
- **Lookahead Schedules:** Lookahead schedules are a forward-planning tool that allows electrical contractors to anticipate and prepare for upcoming tasks and challenges.
- **Change and Additional Tickets:** Change is the only constant on construction projects. Changes and additional tickets often arise during project execution, necessitating adjustments to the original plan.
- **Document Management:** Effective document management is foundational to organizational efficiency, compliance, and knowledge preservation and transfer.

Additionally, we created an SOP template for construction activities and developed an SOP-Pro tool to assist electrical contractors in creating their own SOPs. Finally, recorded videos are available to explain the research deliverables.

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Standard Operating Procedures (SOPs) are documented guidelines and instructions that an organization or an individual follows to perform a task of a process in a consistent and standardized manner.

Why use SOP?

- **Consistency:** SOP ensures tasks are performed the same way every time.
- **Efficiency:** SOP saves time, resources, and reduces errors.
- **Training Tool:** SOP helps new employee understand their job functions.
- **Compliance and Safety:** SOP adheres to regulations and ensures safety.
- **Set-up the project for success:** SOP provide a common vision for how projects are to be executed.

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Daily Log SOP	Procurement SOP	Lookahead Schedules SOP	Change and Additional Tickets SOP	Document Management SOP
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Scope: The *Daily Log SOP* outlines the information that needs to be captured in a Daily Log at the end of a working day. The purpose is to establish a standardized method to ensure consistency, efficiency, and transparency in project execution.

Why:

1. Maintain good documentation and accountability.
2. Ensure quality control.
3. Enhance communication and collaboration.
4. Serve as valuable evidence in dispute resolution.
5. Improve project monitoring and decision-making.
6. Increase knowledge retention for future projects.
7. Provide the means to train new team members.

Users: The Daily Log is to be completed by the Field Leader.

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Scope: The *Procurement SOP* establishes a standardized process for procurement on a construction project.

Why:

1. Streamline the procurement process.
2. Provide better visibility into the process and responsible parties.
3. Increase time efficiency.
4. Increase transparency and accountability.
5. Provide the means to train new team members.

Users: This Procurement SOP is to be used by Electrical Contractor Personnel involved in the procurement process (including estimators, Project Managers, Field Leaders, Pre-fab managers, Purchasing Agents, and Warehouse Managers).

Tools: Two interactive Excel tools are provided with this SOP:

- Vendor Evaluation Tool (VET): A tool designed to evaluate different vendors.
- Excess Materials Handling Tool: A tool designed to facilitate the decision-making on how to handle excess materials on a construction project.

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Scope: The *Lookahead Schedule SOP* establishes a standardized process for the lookahead schedule during construction project execution.

Why:

1. Improve project planning and coordination.
2. Proactively mitigate risks.
3. Allocate resources effectively and prevent bottlenecks.
4. Increase transparency and accountability.
5. Provide the means to adapt to change more effectively.

Users: This Lookahead SOP is to be used by Electrical Contractor Project Managers, Superintendents, and Foremen.

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Scope: The *Change and Additional Tickets SOP* establishes a standardized process to handle change and document additional tickets.

Why:

1. Establish accountability.
2. Ensure the proper management of additional tickets.
3. Promote consistency in the documentation process.
4. Serve as a training material.

Users: This change and additional tickets SOP is to be used by Project Managers and Foremen.

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Scope: The *Document Management SOP* establishes guidelines for the creation and organization of project folders and documents.

Deliverables

Why:

1. Facilitate easy access to files (within a project and across projects).
2. Facilitate seamless collaboration among project team members.
3. Minimize the risk of errors.
4. Improve accountability.

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Users: This Document Management SOP is to be used by project team members.

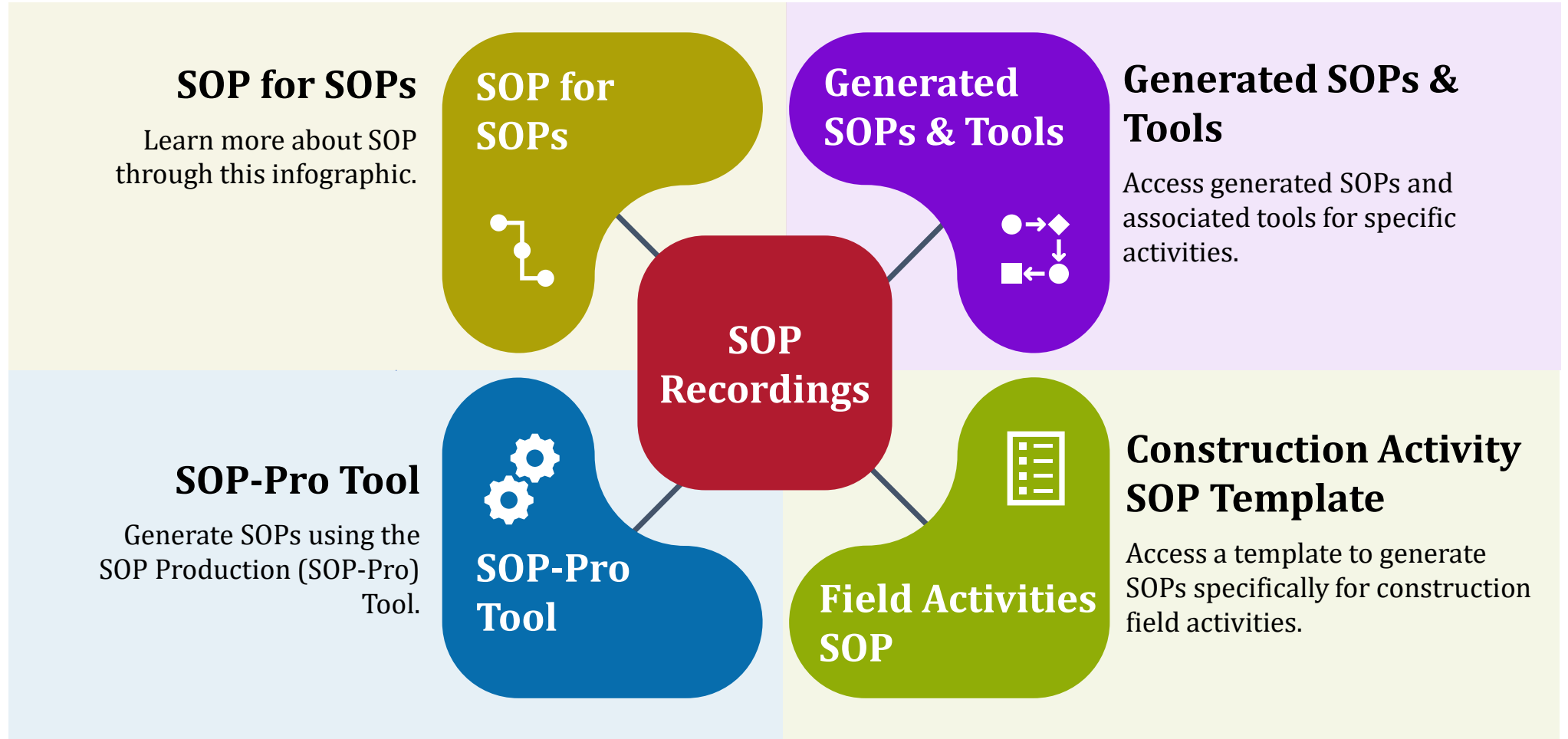
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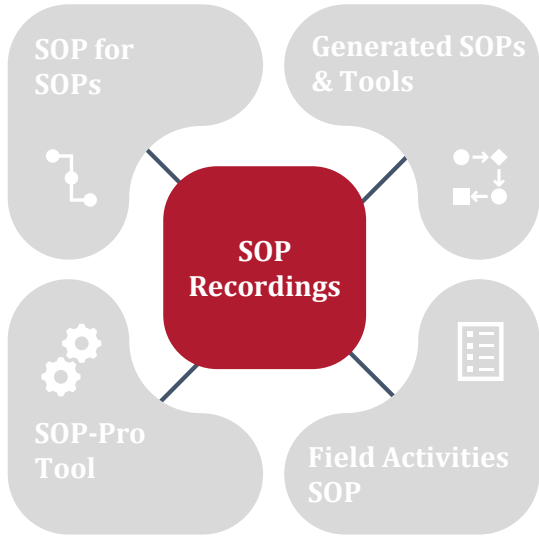
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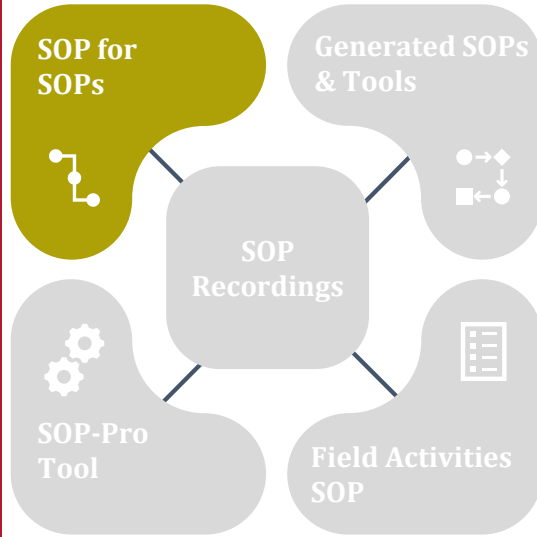
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Access

- SOP Infographic: Learn about the phases of SOPs – Plan, Develop, Implement.



- Download PDF File [here](#).

- Recording

- [SOP infographic](#).

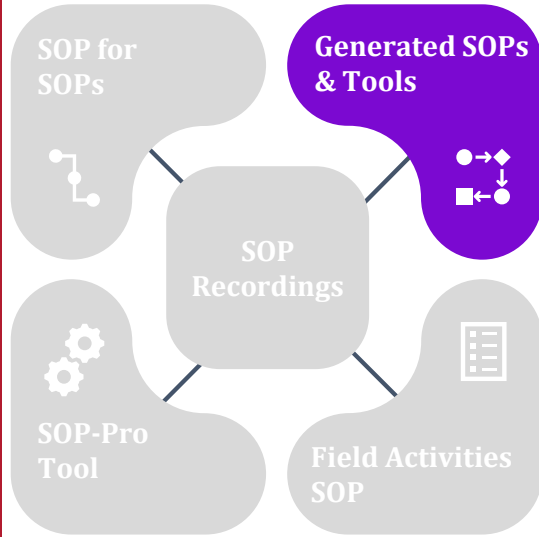
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Deliverables	 Access
<ul style="list-style-type: none">Informational SOP in Word	<ul style="list-style-type: none">Download Word Doc here.
<ul style="list-style-type: none">SOP Fillable Form in Excel	<ul style="list-style-type: none">Download Excel File here.
<ul style="list-style-type: none">SOP Fillable Form in PDF	<ul style="list-style-type: none">Download PDF File here.
<ul style="list-style-type: none">Recording	<ul style="list-style-type: none">Informational and Fillable SOP.

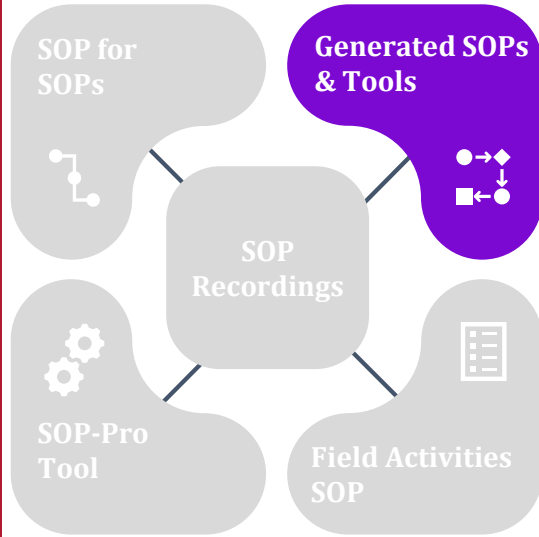
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<ul style="list-style-type: none">VET – Vendors Evaluation tool in Excel	<ul style="list-style-type: none">Download Excel File here.
<ul style="list-style-type: none">Excess Materials Handling Tool in Excel	<ul style="list-style-type: none">Download Excel File here.
<ul style="list-style-type: none">Recordings	<ul style="list-style-type: none">Informational SOP.VET Excel Tool.Excess Materials Handling Excel Tool.

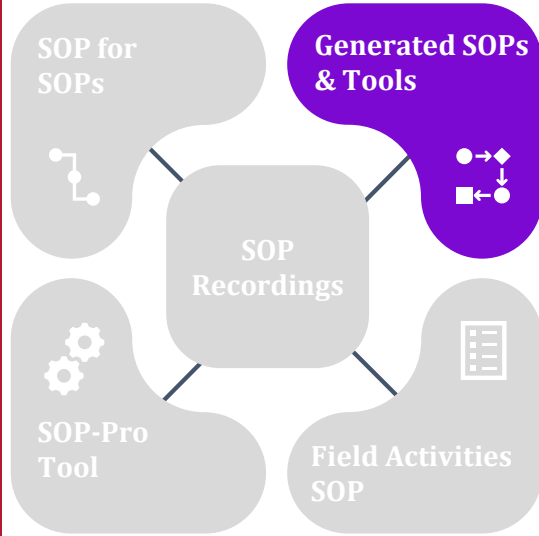
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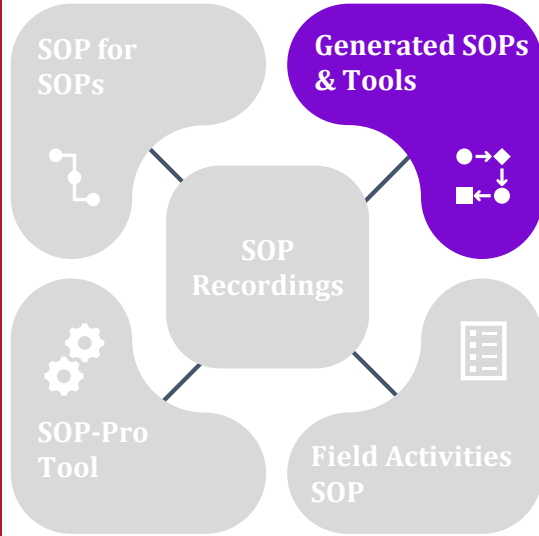
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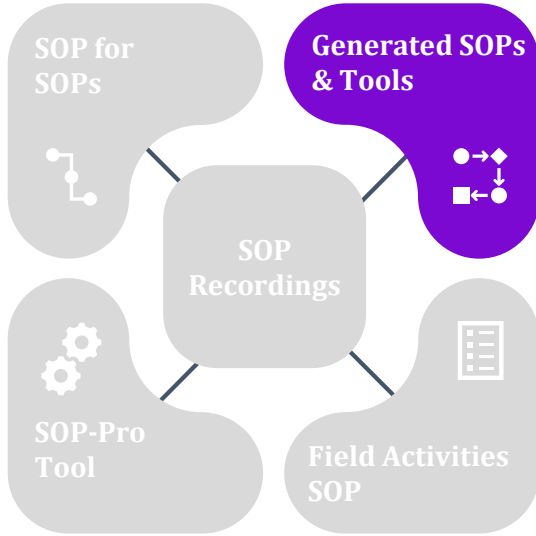
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Deliverables	Access
<ul style="list-style-type: none">Informational SOP in Word	<ul style="list-style-type: none">Download Word Doc here.
<ul style="list-style-type: none">Downloadable Folder	<ul style="list-style-type: none">Download .zip Folder here.
<ul style="list-style-type: none">Recording	<ul style="list-style-type: none">Informational and Downloadable Folder SOP.

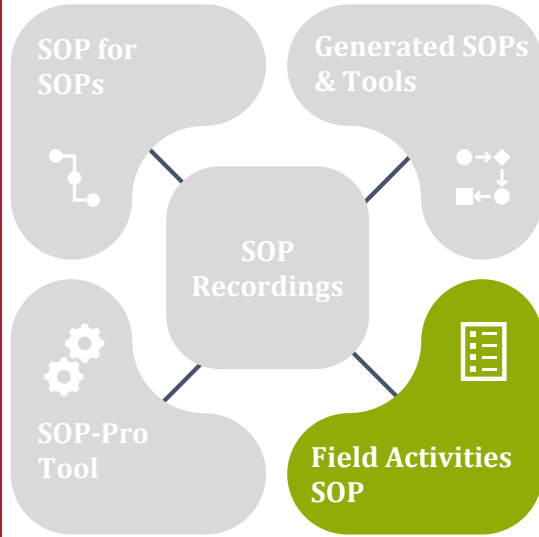
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Deliverables

- SOP for Construction Activities: ITTEM Template in Word

Construction Activity SOP – The ITTEM Template

Scope: Provide a description of the scope

Why: 1. Add why this SOP is important
2. Add why this SOP is important
3. Add why this SOP is important

Users: Define SOP users.

I – Information
<What **Information** is needed to complete the activity?>

T – Team
<Who is the on **Team**? Identify all stakeholders that are involved with the activity?>

T – Tools
<What **Tools** are needed to complete the activity?>

E – Equipment
<What **Equipment** is needed to complete the activity?>

M – Materials
<What **Materials** and **Material Management Activities** are needed?>

- Recording



Access

- Download Word Doc [here](#).

- [ITTEM Template SOP](#).

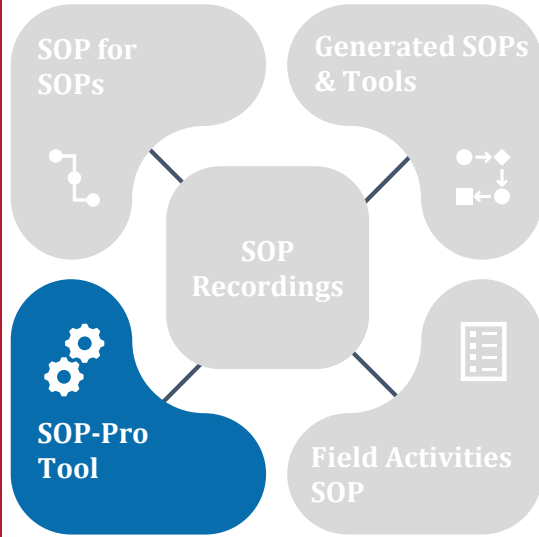
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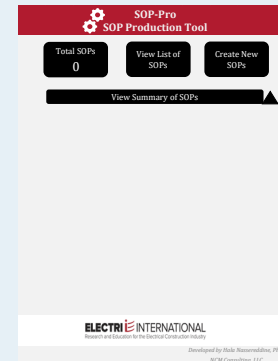
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- **SOP-Pro (pronounced So-Pro):** The SOP-Production Tool is designed to streamline the creation of standardized Standard Operating Procedures for Electrical Contractors.



- Recordings



Access

- Download Excel File [here](#).

- [SOP-Pro Tool Tutorial](#).
- [SOP-Pro Too Promotional Video](#).

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A. Click "Enable Editing".

INSTRUCTIONS
ENABLE MACROS

- 1 | Provide Vendor Name
- 2 | Assign a weight for QUALIFICATIONS and SERVICES
* On a scale of 100%, how important are QUALIFICATIONS when selecting a vendor
* On a scale of 100%, how important are SERVICES when selecting a vendor
* Both weights should add up to 100%
- 3 | Assign weights for each factor under QUALIFICATIONS and SERVICES
* QUALIFICATIONS weights and SERVICES weights should add up to 100%
- 4 | Select an Assessment Level for each factor
* To select an assessment level, double click the corresponding cell.
* For example, double clicking on D12 will highlight "No Information"
* To "unselect" an assessment, right click the corresponding cell and the highlight will disappear.
- 5 | Get Score
* Click on Get SCORE to compute your vendor's evaluation score.
- 6 | Transfer to Database
* Click on Transfer to Database to transfer your assessment to the Database Sheet

B. If you get a "SECURITY RISK" error, following these steps:

SECURITY RISK Microsoft has blocked macros from running because the source of this file is untrusted. Learn More

1. Close the excel file.
2. Right click on the file and select "Properties".
3. Under the "General" tab, select "unblock", and click Ok.
4. Open the excel file again and the problem will be fixed.

#2

#3



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Index Number #F3454