**IPSR Statement of Work (SOW)**

**IPSR Name Project**

**Instructions for use:**

1. Save this file as “Project Name Statement of Work Draft 1”
2. All bold headings should be left as they are. These will form the structure of the document.
3. The Basic Project Information section should cover all the bulleted items, but only *briefly*. The first draft will consist of only this basic information. Later drafts will include detailed information in the Project Plan section.
4. The bullets beneath each heading are suggestions of what should be included in that section. All bullets may not apply to all projects. If none of the bullets apply, then substitute what you think is necessary or simply state “not applicable”. Do not delete the heading even if it is not used.
5. For the first draft, the Project Plan section will usually not be filled in. Just state “Project Plan is being developed”. Leave all the headings in place so that it will be easy to fill in the Project Plan in subsequent drafts. When you are ready to include the Project Plan, provide *all* available details for each topic.
6. In the Project Plan section, if there are more than two phases, add additional section via cut and paste. If the project consists of just one phase, delete the entire phase 2 section.
7. When you are finished, delete these instructions.

**Version #**

**Date**

**Project Leader:**

**Co-Project Leader:**

**TC Coach:**

# Basic Project Information

## Scope of Work

* Describe what work will be done
* State the major goals of the project at the end of project deliverables
* Provide an approximate timeframe for major phases of the project and for completion

## Purpose of Project

* Explain how the project aligns to the roadmap and what gaps will be filled
* Will the project provide a complete solution or be part of a complex solution?
* List anticipated benefits to participants, to the IPSR membership in general, and the industry

## Previous Related Work

* Review any related research or development done within the industry
* Summarize, briefly, directly related academic research, if any

## Prospective Participants

* List all participants and their managers. Strive to include representatives of all facets of the industry, including customers, suppliers, and manufacturers.
* State role and expected contributions of each project team member
* List any known background IP for each participant

# Project Plan

## Schedule with Milestones

* Project plan with identified tasks, intermediate check points, and end dates
* A detailed timeline, including each project activity and each scheduled project review. Use the following format:

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | **Q1** |  |  | **Q2** |  |  | **Q3** |  |  | **Q4** |  |  | **Q5** |  |  | **Q6** |  |  | **Q7** |  |  | **Q8** |  |
| **Phase 1** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Task 1** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Task 2** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| **…** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **…** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Task n** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Phase 2** |  |  |  |  |  |  | TENTATIVE (18months) |  |  |  |  |  |  |  |  |  |  |
| **…** |  |  |  |  |  |  | TENTATIVE (18months) |  |  |  |  |  |  |  |  |  |  |
| **…** |  |  |  |  |  |  | TENTATIVE (18months) |  |  |  |  |  |  |  |  |  |  |

## Phase 1 – Detailed Information

**Task 1 – Task n (include the following information for each task in a separate bullet list)**

* Resources
	+ A detailed list the resources needed and expenditures expected for the project, including human resources, money, and equipment
	+ List of committed resources from participating companies
	+ State source of funding for any components, assembly, design, and testing needs. Alternatives include participant donation, IPSR direct funding, and supplier donation.
* Materials and Processes
	+ Identify the materials to be used. Standard materials should be used whenever possible. Use of standard materials reduces costs, improves yields, and assures the widest applicability of results within the industry. Justification should be provided if non-standard materials are to be used.
	+ Describe any processes to be used, including applicable standards and specifications. Use of standard processes reduces costs, improves yields, and assures the widest applicability of results within the industry. Use of any non-standard processes must be justified.
	+ Any specific suppliers or technologies required and reasons for the requirement
	+ In cases where custom components are necessary, state which project participant is responsible for assuming this cost
* Testing Procedures
	+ State anticipated number of parts to be tested. Use discrimination in choosing samples for failure analysis to maximize ROI.
	+ Use IPC 9701 0-100C as baseline ATC unless justification can be given for alternate test parameters
	+ For test vehicle design and fabrication, it is recommended that reference components that have been ATC tested on previous projects be used to provide a baseline and facilitate comparison of results between projects.
	+ Explain design protocol. Use standard design practices and commonly used software to reduce costs and widen applicability of results.
	+ At what stages testing will be done and time needed

## Phase 2 – Detailed Information

**Task 1 – Task n (include the following information for each task in a separate bullet list)**

* Resources
	+ A detailed list the resources needed and expenditures expected for the project, including human resources, money, and equipment
	+ List of committed resources from participating companies
	+ State source of funding for any components, assembly, design, and testing needs. Alternatives include participant donation, IPSR direct funding, and supplier donation.
* Materials and Processes
	+ Identify the materials to be used. Standard materials should be used whenever possible. Use of standard materials reduces costs, improves yields, and assures the widest applicability of results within the industry. Justification should be provided if non-standard materials are to be used.
	+ Describe any processes to be used, including applicable standards and specifications. Use of standard processes reduces costs, improves yields, and assures the widest applicability of results within the industry. Use of any non-standard processes must be justified.
	+ Any specific suppliers or technologies required and reasons for the requirement
	+ In cases where custom components are necessary, state which project participant is responsible for assuming this cost
* Testing Procedures
	+ State anticipated number of parts to be tested. Use discrimination in choosing samples for failure analysis to maximize ROI.
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	+ At what stages testing will be done and time needed

## Project monitoring plans

* How will you ensure open lines of communication among participants?
* Planned teleconference schedule
* Request progress reports as tasks are completed
* Dates of technical reviews (2 per year) and progress reports and what they will contain
* Practice risk analysis by anticipating problems and having alternate solutions ready
* Use opportunity analysis to identify new areas or topics that might be addressed in additional projects. This will prevent the scope of the current project from expanding and keep the project focused on original goals
* Review project requirements with suppliers before the project begins

## Outcome of the project

* Define project success, including what gaps will be closed
* List all deliverables
* State which project results will be shared, with whom, and by what means

### General and Administrative Guidelines

Purpose of Calls

The purpose of conference calls is to define the elements (tasks) of a Project Plan. Below is a list of specific items to be addressed during these calls:

* Identify gaps in the technology that the project will address
* Establish a clearly defined set of goals for the project
* Clearly define schedule with interim milestones
* Identify resources needed to complete tasks
* Establish consensus on possible approaches to complete the project
* Develop widely applicable generic system and technology solutions
* Develop general processes and methodologies that can be used by IPSR members for company-specific solutions

The intent is **not** to repeat past or present studies and/or projects; but to investigate the possibilities of developing a series of related tasks (a project or series of projects) that will add to the existing knowledge base. IPSR is a member based organization and projects are normally restricted to IPSR members only; however, to get a broader perspective from the industry, the Project formation process is open to anyone interested participating. Participation in the Project formation process will provide a forum in which participants can help establish the agenda for the electronics industry. The ultimate goal of the Project formation discussions is to develop a formalized Statement of Work (SOW) and Project Statement (PS) for the Project (the IPSR SOW and PS templates will be used to assist in the development of the SOW and PS).

Formalizing the Project

* It is important to create a set of goals and clearly define what will be done. These goals and tasks will be included in the project plan.
* IPSR recognizes the need to have a clearly defined set of tasks in the form of a formalized Project Plan, and has developed a set of guidelines and templates to assist teams through the development of a Statement of Work (SOW) and Project Statement (PS) for every project proposed.
* The Project formation team will be responsible for making recommendations as to whether the project should be broken into multiple phases. If so, each phase will require a separate SOW and PS. Evaluation of progress during each phase will determine the viability of the next phase. Examples of possible phases include:
	+ Phase 1 –Literature search and review of previous work and current projects
	+ Phase 2 – Preliminary work to further define the technology and procedures
	+ Phase 3 – Evaluation of a limited set of technical issues defined in phase 2
* The IPSR Director will work with the team to establish the SOW and with the Project Leader(s) to get IPSR TWG Leadership Committee (TC) approval.
* Progress of the Project formation discussions will be provided to the TC to provide information as the formation team identifies and defines the project tasks.
* After the TC has approved the SOW and PS, the Project will be advertised and participation will be open to all IPSR members. The initial signup period is between 30 and 60 days, at which point the project signup is closed.
* Once a project is closed any requests to participate in the project will require approval from the Project’s founding members.
* Note that we will eventually be running a multi-company project. For the project to fall under the “IPSR umbrella” for working in a pre-competitive environment, a Statement of Work (SOW) and a signed Project Statement (PS) from each participating company will be needed.
* To comply with government regulations to collaborate on precompetitive research & development, IPSR membership is required for every participating company. In isolated instances, the project team has the option of inviting technical experts to provide background information to assist in the execution of the project. However, this invitation to address the project team does not mean the invitee is a member of the project team or has any rights to the data collected.
* The IPSR Director will make arrangements to provide an overview of the overall project management process for any participants who have questions or would like additional information. Contact Bob Pfahl at bob.pfahl@inemi.org for more information.

Sharing files

* Any information participants would like to share with the group can be forwarded to the appropriate IPSR Director for distribution to the rest of the participants.
* Copyrighted materials should not be distributed through IPSR without the proper authorization for the holder of the copyright.

Feedback

* Participants are encouraged to provide feedback at any time to assist in IPSR’s efforts to improve the Project formation process.

### *Protection from anti-trust action*

*Protection from anti-trust action will be a requirement for Projects to Proceed. This protection will require registration of members with the Department of Justice and the Commerce Department. Following are draft guidelines to follow while developing this statement of work (SOW)*

Pre-Competitive Research and Development Guidelines

* This consortium is an industry-led consortium that performs pre-competitive research and development projects to improve the global electronics manufacturing infrastructure.
* It's primary objective is to facilitate research and development in connection with materials, components, manufacturing-related technologies and equipment for the manufacture of electronic-photonic products.
* The essential principle that should guide the policies and activities to avoid antitrust violations is that no illegal agreements be either reached or carried out through the association and participating organizations must avoid conduct that might give the appearance of an illegal agreement.
* Companies can participate fully in IPSR activities and projects with minimal possibility of antitrust problems by following a few ***simple do's and don'ts***:
1. DO schedule and attend meetings only when there are proper items of substance to be discussed that justify your attendance.
2. DO review the meeting notice or agenda in advance of every meeting. It should be specific, without broad topics, such as "marketing practices," that might look suspicious from an antitrust standpoint.
3. DO adhere strictly to the stated agenda. In general, subjects not included on the agenda should not be considered at the meeting.
4. DO ensure that no matter of doubtful legality is brought up for discussion. This, of course, is counsel's responsibility; but in his or her absence, IPSR Director representative or any member present who becomes aware of legal implications of a discussion should attempt to halt the discussion.
5. DO make sure that minutes of all meetings are kept and that they accurately report what actions were taken.
6. DO use IPSR as a vehicle for promoting research and the industry as a whole.
7. DO send copies of all IPSR-related correspondence to the IPSR Director and advise the Director of any inaccuracies in proposed statements to be made by IPSR.
8. DO check with the IPSR Director, if there is doubt about the legality of any IPSR policy or program.
9. DON'T allow or participate in any discussions which discourage research or research projects by persons outside of IPSR.
10. DON'T, without specific authorization, make public or private communications about policies or positions of IPSR.