NASA Technologies Management Using Process Libraries and Electronic Handbooks



Quick Summary



Dr. Barry E. Jacobs Barry.E.Jacobs@comcast.net





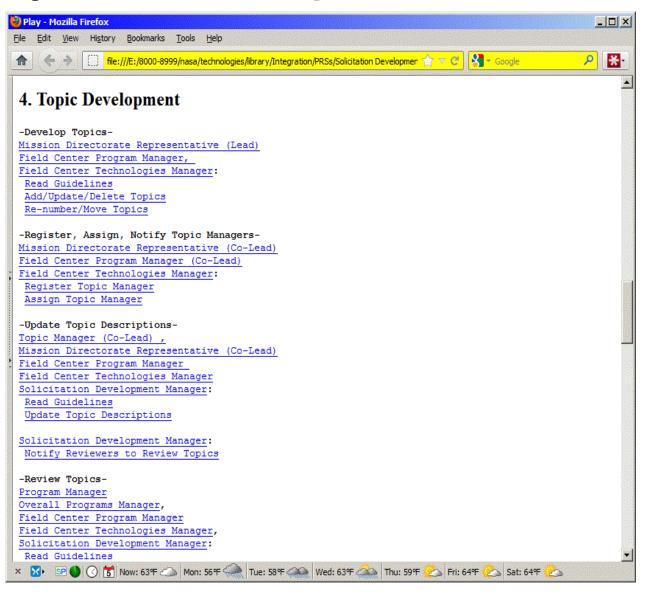
The Bottom Line:

We believe that to truly understand one's universe, one must see it thru multiple "eyes" and also have tools to "communicate" these views.

To do this, we propose editable and cost-saving process documentation "plays" for process developers and participants to help them quickly and effectively learn, integrate, test, teach, and work together.

These "plays" may be added to new or existing systems.

Plays describe subprocess execution.



Benefits:

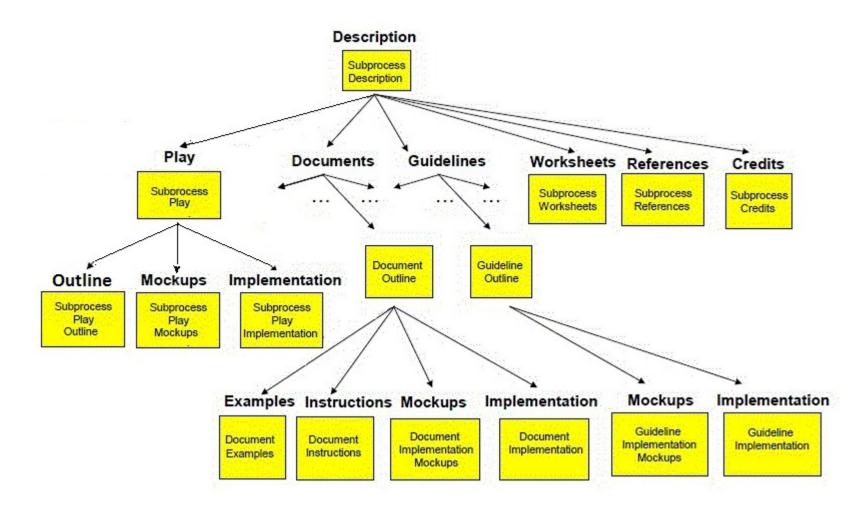
- Facilitates the collection of system and organizational requirements,

- Does not anger/upset people whose opinions are heard,

and

- Increases the interaction between managers, process developers, and participants.

For each subprocess, an "Integration View" is the integration or combination of other subprocess views. An "Integration View" facilitates intra- and inter-organization communication.



All the world's a stage ...

Jaques:

All the world's a stage,

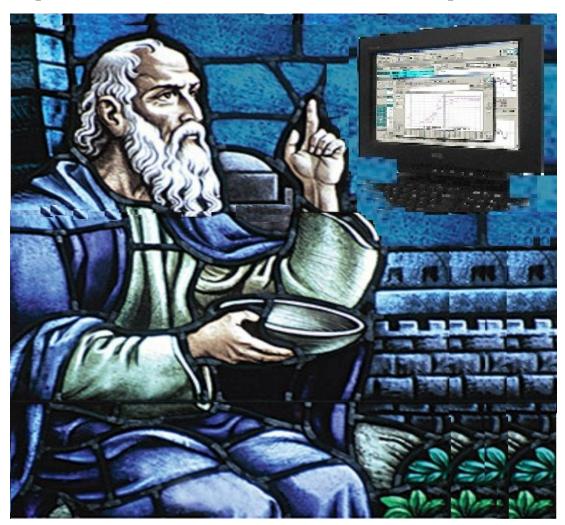
And all the men and women merely players;

They have their exits and their entrances,

And one man in his time plays many parts,

His acts being seven ages.

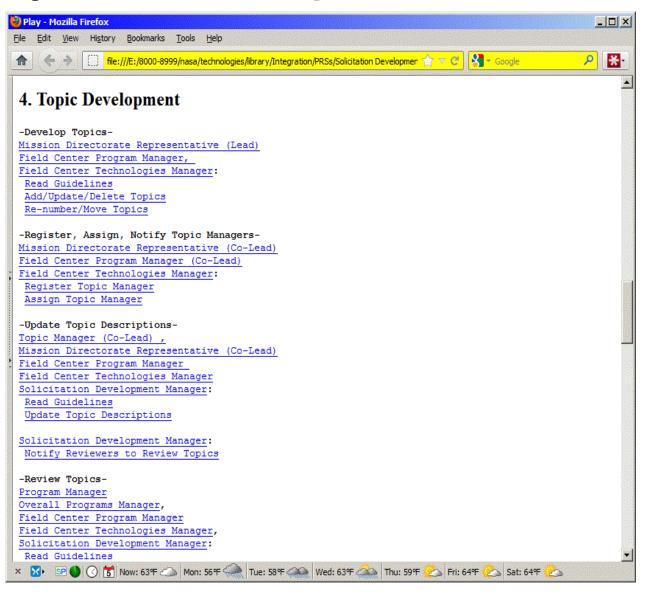
William Shakespeare As You Like It, Act 2, Scene 7. The approach uses a modernization of the Socratic Method or Dialogue to gain consensus between Teachers, Documentors, Managers, Implementors, and Participants.



Descriptions summarize subprocesses.

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Solicitation Development	
Table of Contents	
1. Overview 2. Play 3. Documents 4. Guidelines 5. Others	
1. Overview	
In this subprocess, we deal with the process of developing,, reviewing, and distributing the Solicitation	
Organization: ORG	
<u>All-Files</u> . These are all the view files. <u>Benefits</u>	
2. Play	
In this subprocess, the play is divided in several parts:	▼ Sat: {

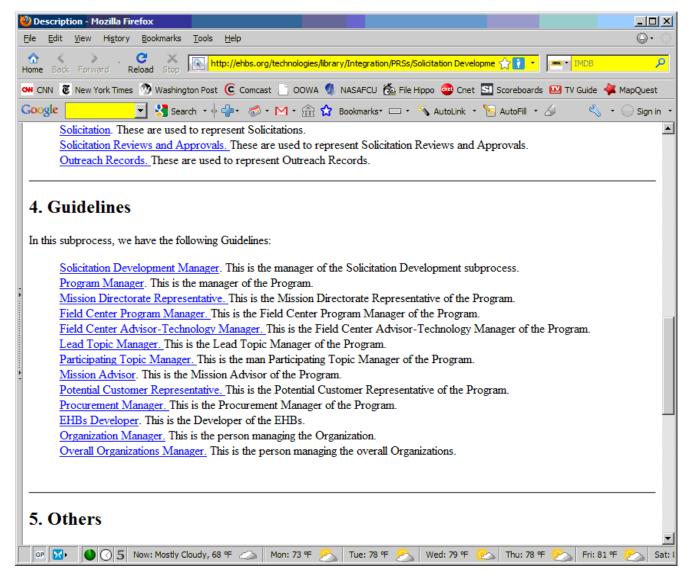
Plays describe subprocess execution.



Documents describe subprocess data.

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8. Analysis. This is where participants use report tools.	
3. Documents	-
In this subprocess, we have the following document types:	
Registrations. These are used to represent user Registrations.	
Guidelines. These are used to represent Solicitation Development Guidelines.	
Topics. These are used to represent Solicitation Topics.	
Front-End. These are used to represent Solicitation Front-Ends.	
Pre-Solicitation. These are used to represent Pre-Solicitations.	
Pre-Solicitation Reviews and Approvals. These are used to represent Pre-Solicitation Reviews and Approvals.	
<u>Pre-Solicitation Public Comments</u> . These are used to represent Pre-Solicitation Public Comments. <u>Solicitation</u> . These are used to represent Solicitations.	
Solicitation Reviews and Approvals. These are used to represent Solicitation Reviews and Approvals.	
Outreach Records. These are used to represent Outreach Records.	
4. Guidelines In this subprocess, we have the following Guidelines:	-
Solicitation Development Manager. This is the manager of the Solicitation Development subprocess.	
Program Manager. This is the manager of the Program.	
Mission Directorate Representative. This is the Mission Directorate Representative of the Program.	
Field Center Program Manager. This is the Field Center Program Manager of the Program.	_
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Guidelines describe user subprocesses.



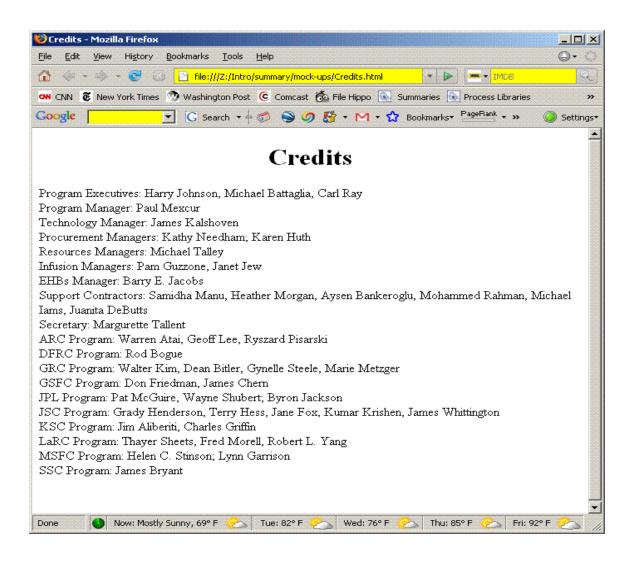
Subprocess Worksheets facilitate subprocess manager communication with process developers and participants.

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	l	Task Lead, Subtask Lead, Subtask					Samples	Lead(s)	Date	Date	Location(s)
Administration	The purpose of this task is to administer Project Development .	Member, Reviewer, Approval Official, Project Manager, Documents	James Green	07/23/07	08/23/07	Document Library	Instructions and Samples	James Green	06/23/07	07/23/07	Library: NS2034
		Reviewer, Approval Official, Project Manager, Documents Manager Task Lead, Subtask Lead, Subtask Lead, Subtask Lead, Subtask Member, Reviewer,				Document Library Critical Design Review (CDR)Documents Draft Project Requirements			06/23/07	07/23/07	NS2034 Library: NS2034 Library:
Administration	Development .	Reviewer, Approval Official, Project Manager, Documents Manager Task Lead, Subtask Lead, Subtask Lead, Subtask Member,	Green	07/23/07	08/23/07	Critical Design Review (CDR)Documents	Samples Instructions and Samples	Green James Green			NS2034 <u>Library</u> : NS2034

References list other related resources.

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Credits acknowledge people's contributions.



Tools that can be focused on during stagesby tool.

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	Plays	Learn, Integrate, Test, Tesck, Work Together	Learn, Integrate Documents Using Role Guidelines/ZHBs, Test, Tesch, Work Together	
-	Documents	Learn, Integrate, Test, Tesch, Work Together	Learn, Integrate Document: Using Role Guidelines/ZHBs, Test, Tesch, Work Together	
	Role Guidelines/EHBs	Learn, Integrate, Test, Tesch, Work Together	Learn, Integrate Document: Using Role Guidelines/IHBs, Test, Tesch, Work Together	
	Subprocess Worksheets	Learn, Integrate, Test, Tesck, Work Together	Learn, Integrate Documents Using Role Guidelines/ZHBs, Test, Teach, Work Together	
	References	Learn, Integrate, Test, Tesch, Work Together	Learn, Integrate Documents Uning Role Guidelines/ZHBs, Test, Tesch, Work Together	
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Tools that can be focused on during stagesby stage.

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		Tools To Focus On Dur	ing Stages- By Stage.	
	Stage	Process Developer	Process Participant	
	Learn	Descriptions, Plays, Documents, Role Guidelines/EHBs, Subprocess Worksheets, References, and Credits.	Descriptions, Plays, Documents, Role Guidelines/EHBs, Subprocess Worksheets, References, and Credits.	
	Integrate	Descriptions, Plays, Documents, Role Guidelines/EHBs, Subprocess Worksheets, References, and Credits.	Documents Using Role Guidelines/EHBs.	
	Test	Descriptions, Plays, Documents, Role Guidelines/EHBs, Subprocess Worksheets, References, and Credits.	Descriptions, Plays, Documents, Role Guidelines/EHBs, Subprocess Worksheets, References, and Credits.	
	Teach	Descriptions, Plays, Documents, Role Guidelines/EHBs, Subprocess Worksheets, References, and Credits.	Descriptions, Plays, Documents, Role Guidelines/EHBs, Subprocess Worksheets, References, and Credits.	
	Work Together	Descriptions, Plays, Documents, Role Guidelines/EHBs, Subprocess Worksheets, References, and Credits.	Descriptions, Plays, Documents, Role Guidelines/EHBs, Subprocess Worksheets, References, and Credits.	

Objective: Develop Internet-based tools to support the paperless documentation and management of complex distributed processes.

Integrated Problems-Solutions Database Planning Technologies Solicitation Development Integrated Problems- Solutions Database Planning Distributions Distributions Solutions Database Planning Distributions Distributions Survey Management Computer Systems Development Systems Systems Development	Product Rea Proposal Submission (Potential Cus	nnologie dization Subproce Review & Selection stomers: Flight Pr tribution Subproce Problem	S Negotiation & Award ojects) esses Problem Agr Iandling Agr	Administrat		iebster ut Post-Closeout
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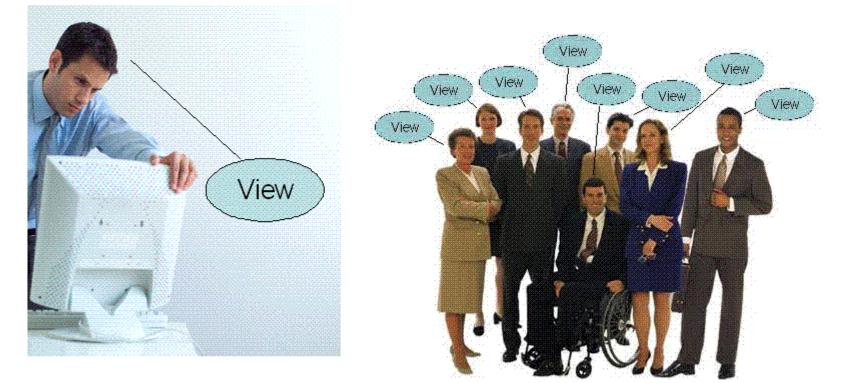
Organizations provide different views of the subprocesses, some of which may be proprietary.

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	Product Realization Subprocesses Organizations	
	AST Aeronautics Technology	
	Red Planet Technologies	
	BPR Bio and Phys. Research.	
	BPR Space Station	
	CDDF Center Directors Discretionay Fund	
	ES Earth Science	
	Agency Health and Medical Care	
	SR&QA	
	Asademic Programs SBIR	
	SF Space Communications	
	SF Space Shuttle	
	SF Missions Communications	
	SF Payload Util & Ops	
	SF Investments and Support	
	SS Space Science	
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	Product Distribution Subprocesses Organizations	
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	DFRC TCO	
	Far West-RTTC	
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Organizations execute the eight "Play Development" stages.

- 1) summarizing (descriptions),
- 2) playwriting (outlines),
- 3) staging (mockups),
- 4) dress rehearsal (implementations),
- 5) performance (implementations),
- 6) evaluations (implementations),
- 7) revisions (outlines, mockups, implementations),
- and
- 8) closing.

People in organizations provide different views of the subprocesses



Subprocess Documentor's View

Subprocess Teacher's, Manager's, Implementor's and Participant's Views

Organizations generate Subprocess Life-Cycle* Views

- Organization subprocess teachers want to quickly learn, integrate, test, and teach their own views of their subprocesses. (Critical)
- Organization subprocess documentors want to quickly learn, integrate, test, and teach their own views of their subprocesses. (Critical)
- Organization subprocess managers want to quickly learn, integrate, test, and teach their own views of their subprocesses. (Critical)
- Organization subprocess implementors want to quickly learn, integrate, test, and teach their own views of their subprocesses. (Critical)
- Organization subprocess participants want to quickly learn, integrate, and perform tasks that are part of their views. (Critical)
- Organization subprocess managers want to quickly monitor execution of tasks that are part of their views.
- Organization subprocess teachers, documentors, managers, implementors, and participants want to quickly improve, test, and teach their subprocesses.
- Organization subprocess teachers, documentors, managers, implementors, and participants want to quickly improve, test, and teach using other organization's views.
- Organization subprocess teachers, documentors, managers, implementors, and participants become hurt/angry when their views are not supported.
- Organization subprocess implementors want to quickly update, test, and teach tools that help facilitate execution of their subprocesses.
- Organization subprocess teachers, documentors, managers, implementors, and participants want to quickly leave when their views continue not to be supported.

* Also, called the "Universal Subprocess".

The "Game of Telephone" Syndrome: Where People Pass-On Only Parts of the "Message"

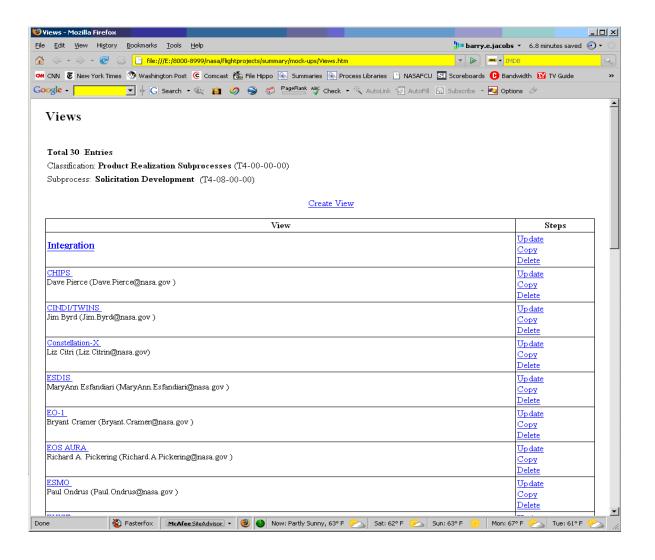




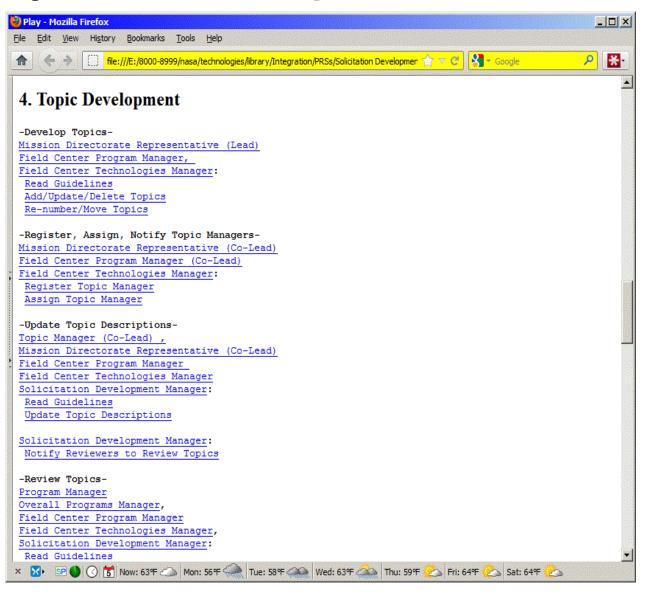
Overview of how editable and cost-saving process documentation tools can solve problems.

Problem	Solution
Develop Internet-based tools to support the paperless documentation and management of complex distributed processes.	Editable process documentation tools can be tailored to each subprocess.
Organizations provide different views of the subprocesses.	Editable process documentation tools can be tailored to reflect different organization's views of the subprocess.
Organizations execute the eight "play development" stages.	Editable process documentation tools can be tailored to reflect the eight "play development" stages.
People in organizations provide different views of the subprocesses.	Editable process documentation tools can be tailored to communicate different people's views of the subprocess.
Organizations generate Subprocess Life-Cycle Views.	Editable process documentation tools can be tailored to reflect different Life-Cycle views of the subprocess.
The "Game of Telephone" Syndrome: Where People Pass-On Only Parts of the "Message".	Editable process documentation tools can be tailored to layer below different people's views of the subprocess.

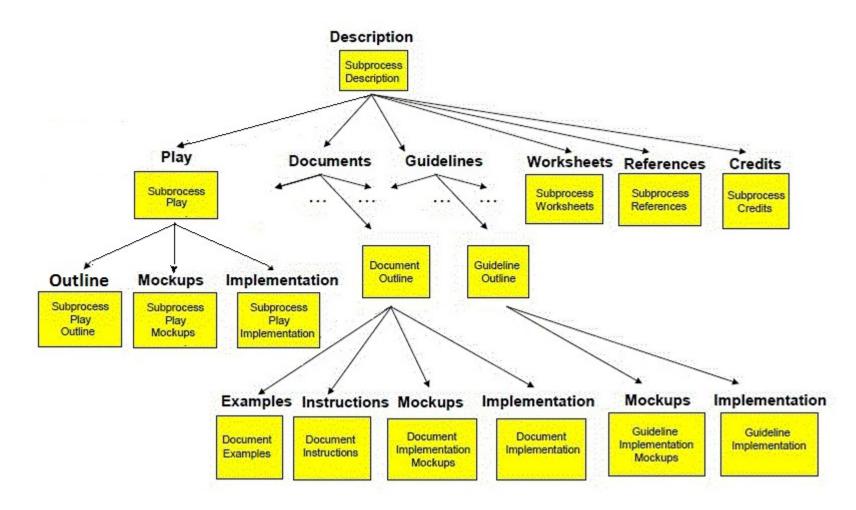
Solution: Process Libraries maintain organization's views of the subprocesses.



Plays describe subprocess execution.



For each subprocess, an "Integration View" is the integration or combination of other subprocess views. An "Integration View" facilitates intra- and inter-organization communication.



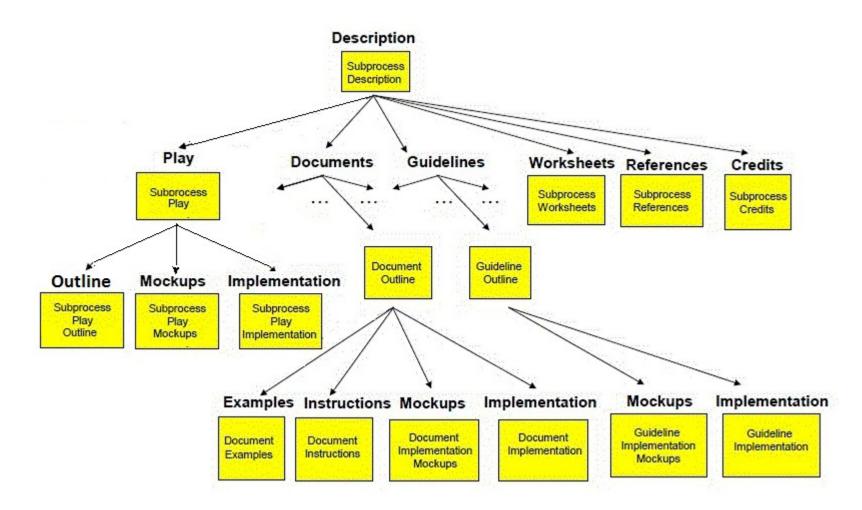
Tools that can be focused on during stagesby tool.

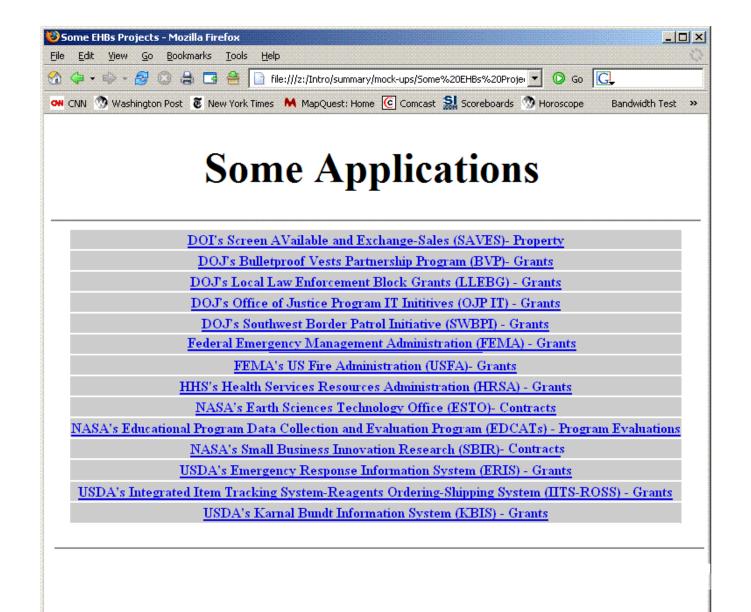
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	Tool	Process Developer	Process Participant	
	Descriptions	Learn, Integrate, Test, Teach, Work Together	Learn, Integrate Documents Using Role Guidelines/ZHBs, Test, Teach, Work Together	
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Tools that can be focused on during stagesby stage.

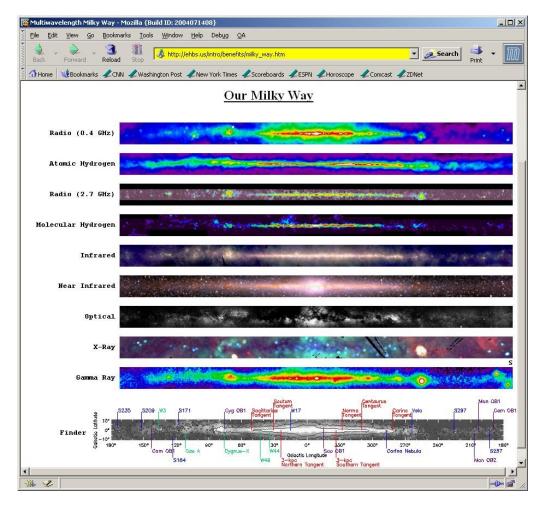
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		Tools To Focus On Dur	ing Stages- By Stage.	
	Stage	Process Developer	Process Participant	
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	Integrate	Descriptions, Plays, Documents, Role Guidelines/EHBs, Subprocess Worksheets, References, and Credits.	Documents Using Role Guidelines/EHBs.	
	Test	Descriptions, Plays, Documents, Role Guidelines/EHBs, Subprocess Worksheets, References, and Credits.	Descriptions, Plays, Documents, Role Guidelines/EHBs, Subprocess Worksheets, References, and Credits.	
	Teach	Descriptions, Plays, Documents, Role Guidelines/EHBs, Subprocess Worksheets, References, and Credits.	Descriptions, Plays, Documents, Role Guidelines/EHBs, Subprocess Worksheets, References, and Credits.	
	Work Together	Descriptions, Plays, Documents, Role Guidelines/EHBs, Subprocess Worksheets, References, and Credits.	Descriptions, Plays, Documents, Role Guidelines/EHBs, Subprocess Worksheets, References, and Credits.	

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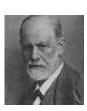


We believe that to truly understand one's universe, one must see it thru multiple "eyes" and also have tools to "communicate" these views.





Process Libraries (PLs) and Electronic Handbooks (EHBs) are where Shakespeare meets Freud.



- In Process Libraries (PLs), subprocesses are represented as "plays" where "actors" communicate thru the Internet. Each organization puts on its own "productions". For each role, Electronic Handbooks (EHBs) (also called Guidelines) guide "actors" thru their parts. Managers are "directors" using Worksheets as learning/management tools. Documentors serve as "playwrights". [Shakespearean]
- Organizations are represented as "families" having "multiple personalities". Subprocess "plays" and its "components" provide communication vehicles between members of the same family, different families, and families from different subprocesses. Documentors also serve as "family therapists". [Freudian]

All the world's a stage ...

Jaques:

All the world's a stage,

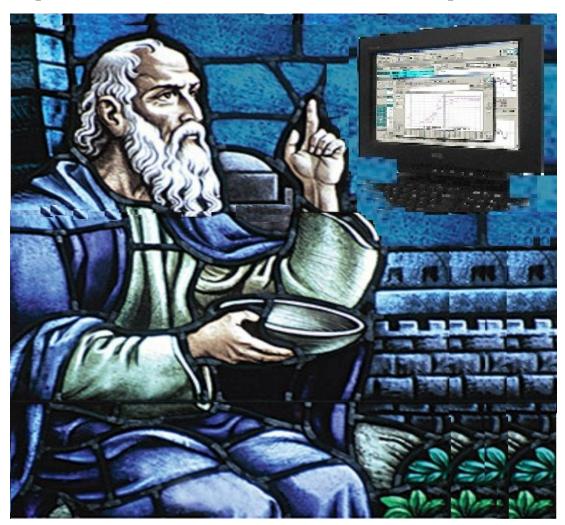
And all the men and women merely players;

They have their exits and their entrances,

And one man in his time plays many parts,

His acts being seven ages.

William Shakespeare As You Like It, Act 2, Scene 7. The approach uses a modernization of the Socratic Method or Dialogue to gain consensus between Teachers, Documentors, Managers, Implementors, and Participants.



Theatre of Dionysus- Athens, Greece



For More Details

