Flowcharting

Picturing the Process
1. **Overview of flowcharts**
   a) Why use them?
   b) Functions & Benefits
   c) Getting Started
   d) How To:
      (Detailed Flowcharts)

2. **Examples/Variations**
   a) Detailed
   b) Block/Macro
   c) Top-down
   d) Deployment

3. **Q & A**
Why use flowcharting?

• Identify **actual** flow / sequence of events in a process

• Determine…
  • “What is going on?”
  • “Are there delays?”
  • “What are the next steps?”
  • “How can we improve this process?”
SHOWS...
- Over-complexity
- Redundancy
- Unnecessary loops
- Needs for standardization
- How systems fit together

COMPARES...
- Actual vs. Ideal flow
ENABLES…
- Agreement / mutual understanding of steps
- Examination of efficiency and impact
- Identification of missing data

SERVES…
- As training aid to better understand process
- To build enthusiasm for process & quality improvement
Who… are the **right people**?

What… do **you expect** from the flowchart?

Who… **will use it**?

How… will they use it?

What… is the **level of detail** needed?

What… are the **boundaries of the process**?
How to: *Detailed Flowcharts*

1. Determine the frame or boundaries of the process
2. Determine the steps in the process
3. Sequence the steps
4. Draw the flowchart
5. Test the flowchart for completeness
6. Finalize the flowchart
EXAMPLE: Actual ...to... Future State

**PROBLEM**

**Materials Review:** *Agencies wait over a month for routine materials to be approved.*

1. Flowchart the *actual* process.
2. Identify the problem.
3. Create a *future state* process (that eliminates unnecessary wait time).
1. Determine the frame or boundaries of the process

- Define where the process starts and ends.
- What level of detail is needed to understand the process and identify the problem(s)?
- Decide on type(s) of flowchart.
Example: **Step 1**

- **Start=**
  - Agency submits materials for review

- **End=**
  - Agency receives approval for materials
2. Determine the steps in the process

**Brainstorm**
- Major activities
- Inputs
- Decisions

**Gather information**
- Experience
- Observation
- Conversation
- Interviews
- Research
Example: Step 2

Materials Submission... to ...Approval:

What happens?
3. Sequence the Steps

- Arrange the steps in the sequence they occur.

**TIPS**

- Use Post-it notes so you can rearrange the steps.
- Don’t draw in arrows yet.
- “As Is” flowchart = what is happening now (for better or worse).
Agency submits material.

1. **DECISION**: Does it meet criteria?
2. PE approves it for panel.
3. AA prepares all documents and copies for panel members.
4. AA snail-mails documents to panel members.
5. Panel members review materials.
6. **DECISION** (per panel member): Approve/Disapprove?
7. Panel members snail-mail reviews back to IDPH.
8. AA contacts panel members for late reviews.
9. AA documents all reviews and files paperwork.
10. AA informs Agency of Approval/Disapproval once majority vote is achieved.

Agency is informed of approval.

**Example:**

**Step 3**

**PE** = Program Evaluator

**AA** = Administrative Assistant
4. Draw the flowchart using the appropriate symbols

- **Stop and Start**: Shows the start or end of a process.
- **Activity**: Reflects a single process step. Briefly describe the step inside the box.
- **Decision**: Signifies that a decision is made here. It indicates a branch point. The answer determines the path taken to the next step.
- **Delay**: Signifies a delay or waiting period.
- **Arrows**: Point out the direction of flow from one activity or decision.
When Drawing the Flowchart...

- Use basic symbols.
- Be consistent in the level of detail shown.
- Label each process step.
- Add arrows to show the direction of the flow.
- Identify your work. (e.g., title, date, names of team members).
Example: Step 4

MATERIALS REVIEW: **ACTUAL PROCESS** (February 21, 2011)

- **Agency submits materials to IDPH for review**
  - **Does the material meet criteria?**
    - **NO**
      - **PE returns material to agency with suggestions for changes.**
    - **YES**
      - **PE approves the material for review panel**
        - **PE sends material to AA for preparation.**
          - **AA prepares all documents and copies for panel.**
            - **AA snail-mails documents to each panel member.**
              - **Panel members wait to receive materials in mail.**
          - **YES/NO**
            - **PE sends material to AA for preparation.**
              - **AA prepares all documents and copies for panel.**
                - **AA snail-mails documents to each panel member.**
                  - **Panel members wait to receive materials in mail.**
          - **Panel members return reviews via snail-mail.**
            - **IDPH waits to receive reviews in mail.**
        - **IDPH waits to receive LATE reviews in mail.**
          - **Majority vote is attained.**
            - **AA emails agency with approval / disapproval.**
          - **NO**
            - **AA sends reminder emails to panel members who are late with reviews.**

- **AA logs & files panel responses as they are returned.**

**PE** = Program Evaluator

**AA** = Administrative Assistant
5. Test the Flowchart for Completeness

- Are the symbols used correctly?
- Are the process steps identified clearly?
- Are feedback loops closed?
- Is there only one output arrow from each activity box?
- Validate the flowchart with people who are not on the team who carry out steps in process.
6. Finalize the Flowchart

- Is the process being run the way it should be?

- Are people following the process as charted?

- Are there complexities or redundancies?

**Actual vs. Future State**

Draw a Future State Flowchart. Compare to Actual.

- What are the discrepancies?

- What can be improved?
Example: Step 5-6

MATERIALS REVIEW: **ACTUAL PROCESS** (February 21, 2011)

**PE = Program Evaluator**

**AA = Administrative Assistant**
Future State Flowchart

- **Improved** process.
- Eliminates problems and errors (or as many as possible).
- Process as it *should* be.
Functionalized into an actual tracking sheet...

NAME OF MATERIAL: ____________________________

AGENCY: _________________________________

DATE RECEIVED FROM AGENCY: ___________

DATE REV. PROCESS COMPLETED: __________

MATERIALS REVIEW PROCESS
*Tracking Sheet* (2011)

Revised 02.10.2011

<table>
<thead>
<tr>
<th>REVIEWER</th>
<th>DATE RECE'D</th>
<th>APPROVED</th>
<th>DISAPPROVED</th>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Total APPROVED</th>
<th>Total DISAPPROVED</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tr>
</tbody>
</table>

AA records material on MATERIALS REVIEW TRACKING TABLE 2011:

END: AA emails agency within 1 business day of final majority approval to inform them of APPROVED materials.

DATE AGENCY EMAILED APPROVAL: __________

AA files together: 1) application; 2) approved material; 3) each panel review form; and 4) this tracking worksheet.

DATE MATERIAL APPROVED: __________

AA records Eval response on TRACKING FORM.

Did panel member CC PE on the email?

YES

AA forwards member's email and Eval to PE.

NO

Did the panel member APPROVE the material?

YES

Have 3 or more others APPROVED?

YES

Material has been APPROVED

NO

Material has been DISAPPROVED.

DATE MATERIAL DISAPPROVED: __________

Did panel member submit Evaluation Forms to?

YES

Panel Members submit Evaluation Forms to.

NO

AA prints & files hard-copies of the material & application.

Date Email Sent to Panel: __________

Panel reviews story and completes evaluation forms.

AA saves Evaluation Forms in Word as "Protected Documents."

EVAL DUE DATE: __________

Does the material meet criteria?

YES

AA assigns Evaluation DUE DATE for no more than 15 business days from the date materials are emailed to the panel (longer materials may need up to 25 days from email).

NO

Agency revises material for re-submission.

Agency revises material for re-submission.

PE contacts agency to request revisions.

DATE MATERIAL DISAPPROVED: __________

PE saves electronic copies of material & application to the H:Drive.

Is the material a ROLE MODEL STORY?

YES

AA uses information from agency's application to complete PAGE 1 of the ROLE MODEL STORIES MATERIALS Evaluation Form.

NO

AA uses information from agency's application to complete PAGE 1 of the GENERAL MATERIALS Evaluation Form.

3 business days before DUE DATE AA emails reminder notice to any panel member who has not yet returned evaluation.

Date Reminder Email Sent: __________

Material has been DISAPPROVED.

Have 3 or more others DIS-APPROVED?

YES

Wait for simple majority vote. Email 2nd reminder if Due Date has passed.

NO

Date Email Sent: __________

PE emails material & application to AA.

AA emails Review Panel members, attaching PDF of role model story and Evaluation Form (as protected document). *Include PE in CC: line of this email.

Email contains: 1) Due Date; and 2) Instructions for filling out protected word document.

DATE MATERIAL APPROVED: __________

Does the material meet criteria?

YES

PE reviews application & material (within 3 business days).

NO

Agency revises material for re-submission.
Flowchart Variations

- Detailed
- Block/Macro
- Top-down
- Deployment

*How to: Detailed*
Detailed Flowchart

- Most complex

- Details: inputs, activities, outputs

- Rework loops, decision points, & delay symbols

- Used to design the future state process flow

- Used for orientation/training purposes

- Points to potential data collection needs
Detailed Flow Chart: Materials Review

**START:** Agency Emails Materials Review Application to PE

- PE reviews application & material (within 3 business days).
- **Does the material meet criteria?**
  - **YES:** Agency revises material for re-submission.
  - **NO:** PE contacts agency to request revisions.
- PE emails material & application to AA.
- AA prints & files hard-copies of the material & application.
  - **YES:** AA uses information from agency’s application to complete PAGE 1 of the ROLE MODEL STORIES MATERIALS Evaluation Form.
  - **NO:** PE saves electronic copies of material & application to the H:Drive.
- **Is the material a ROLE MODEL STORY?**
  - **YES:** Panel reviews story and completes evaluation forms.
  - **NO:** AA uses information from agency’s application to complete PAGE 1 of the GENERAL MATERIALS Evaluation Form.
  - 3 business days before DUE DATE AA emails reminder notice to any panel member who has not yet returned evaluation.
- **Material has been DISAPPROVED.**
  - **YES:** Have 3 or more others DIS-APPROVED?
    - **NO:** Wait for simple majority vote. Email 2nd reminder if Due Date has passed.
    - **YES:** Have 3 or more others APPROVED?
      - **NO:** Did the panel member APPROVE the material?
        - **NO:** AA forwards member’s email and eval to PE.
        - **YES:** AA records Eval response on TRACKING FORM.
      - **YES:** Did panel member CC PE on the email?
        - **NO:** AA forwards member’s email and eval to PE.
        - **YES:** AA records Eval response on TRACKING FORM.
- **Material has been APPROVED**
  - **YES:** AA records material on MATERIALS REVIEW TRACKING TABLE 2011.
  - **NO:** AA files together: 1) application; 2) approved material; 3) each panel review form; and 4) this tracking worksheet.

**END:** AA emails agency within 1 business day of final majority approval to inform them of APPROVED materials.
Block/Macro Flowchart

- Simplest form
- Only shows major steps

Materials Review

Agency submits material → Panel reviews materials → IDPH sends agency approval/disapproval
Top-down Flowchart

- Identifies steps within a block
- No feedback or rework loops

Materials Review

Agency submits material

Panel reviews materials

IDPH sends agency approval / disapproval

Application Form

Mail members review packets

Complete review form

Return review form

Email agency

File documents

8 copies via snail mail
- Assigns responsibility and flow of tasks.
- Clarifies roles & tracks accountability
Materials Review Process (2011)

**Deployment Example (Horizontal) SWIM LANE**
Materials Review
1. Overview of flowcharts
   a) Why use them?
   b) Functions & Benefits
   c) Getting Started
   d) How To:
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2. Examples/Variations
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QUESTIONS?