CMMI For Small Business

OR

"How Much Can I Get Done with Almost No Resources
and Little or No Money???"

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Agenda

1. **Brief Overview of CMMI - Continuous Representation and Why It's Important to a Small Business.**

2. **The Significance of Operational Dynamics in a Small Company. Which Ones are Useful?**

3. **Process areas Selected as High Priority based on 'Balanced Minimalization' and 'Value Add'**

4. **Convert a CMMI Process Area into a Project Plan, Policies and Procedures.**

5. **Simple templates for Small Business.**

What is CMMI About??

1. **Continuous Process Improvement (CPI)**
2. **Improving the way we do business**
3. **Standardization, Simplification, Specialization, Structure**
4. **Making people feel good about their jobs**
5. **Making better decisions**
6. **Predictability, Repeatability,Accountability & Responsibility**
7. **CMMI is a model for improvement using best practices**
8. **Adds Maturity to your Operating Mode.**

Why Use Models???

Models help us achieve improvement in a predictable, measurable and organized way.

Models Provide:

- **Best Practices**
- **Standards and Guidelines**

CMMI Continuous Representation

•You can select from 1 to 25 Process Areas for your journey.

•You Can Brag About Each PA (Process Area) as you are Appraised and Certified.

• Appraisals are Measured Against Goals and Practices (sort of) for a Single Process Area.

•Goals   = Policies
•Practices   =Procedures, Work Instructions, Checklists,
                        Guidelines & Standards

Importance of Continuous Representation to small business.

L 5				
L 4	Req Mgmnt & Req Devel.		Config Mgmnt	Process And Product QA	Etc Etc
L 3					
L 2					

Appraisal is on any distinct CMMI Process Area.
Works great for small companies with limited resources.

Specific Goals = Policies

1. **Specific Goals-Apply to a single process area and describe the unique characteristics that must be implemented. (Critical for Appraisals)**

2. Multiple SG's per capability level for all 25 PA's. From 1 (REQM) to 4 (IPM)

3. Each SG builds on the previous level.

4. How many total? 55! (for all 25 PA's)

5. Goals are achieved by (tailoring) performing the appropriate practices.

Specific Practices Page 1

1. **A specific practice is an activity that is considered important in achieving the associated specific goal.**

2. SP's are given but are expected to be tailored or eliminated. (With cause)

3. **This is where the meat is!**

(Cont)

Specific Practices Page 2

4. **We must 'DO' the Specific Practices but always look to see that we are contributing toward achieving each Goal.** Use 'Balanced Minimalization' and 'Value Add' as our yardstick.

5. Why? We are appraised on how well we meet the SEI interpretation of what it takes to demonstrate we have achieved a GOAL. I.e. We must actively demonstrate how we meet each Goal.

6. Traceability from the model is the glue to hold our infrastructure together for its' entire life cycle.

Line #	Goal ID	Practice ID	Goal/Practice Name and Description	Policy ID and Title	Procedure ID and Title	ID and Name of Work-Flow Diagrams; Templates; Checklists; Forms; Work Instructions.	Name and ID of Guidelines and Standards.	Name, ID and Location of Objective Evidence.
1	SG1		**Establish Baselines** Baselines of identified work products are established.	Configuration Management Policy – CM-POL-001				
2	SG1	SP1.1-1	**Identify Configuration Items** Identify the configuration items, components, and related work products that will be placed under configuration management.		CM-PROC-003 - Configuration Management Plan Procedure	CM-TEMP-001 – Configuration Management Plan (CMP) Template		Approved CMP in CM
3	SG1	SP1.2-1	**Establish a Configuration Management System** Establish and Maintain a configuration management and change management system for controlling work products.		CM-PROC-010A – CM Tool Utilization Procedure (PVCS) CM-PROC-014A – CM Tools Permissions Request Procedure (PVCS)	CM-FORM-009 CM Tools Permission Request (PVCS)		Approved PMP Approved CMP WBS Change Requests CR Register Audit Reports Status Reports Backup Discs Recovery Plan

Use Operational Dynamics to Organize a Small Business for Continuous Process Improvement

- Matrix Management
- Skills
- Role Centric versus Action Centric
- Time Management
- Responsible, Accountable, Authority.
- Management by Project
- 'Minimum Unit of Work' in Deploying Policy and Procedures.
- Boot-Strap Consortiums for Process Sharing

Matrix Management (MM)

- Small Business - Too small to have dedicated specialists.
- Need flexibility.
- MM adds rigor to the cloud in a small company.
- 2 Bosses, line manager and project manager(s).
- Make, break, remake teams as needed.
- Great for a small company.

Skills

- Everyone has multiple skills.   Often we don't know how valuable we are.
- Not easy to find skills after someone has 'settled' in.
- You need them badly for roles, when you need them.
- People LOVE to brag. Take advantage of this.
- Do an inventory of skills! You have untapped skills! I promise!
- Use a Resource Manager role to manage this.

Role Centric versus Action Centric

- Rarely are there defined roles or job descriptions (JD) in a small company.
- People need to know what they should do (JD) and where they fit (Role) in an organization.
- Job descriptions and roles satisfy that need.
- One person can have multiple roles (hats)
- All roles required for a process must be filled.
- Define Roles while Prepping Policies and Procedures.

Time Management

- There is never enough time to do both CPI and 'Customer' work. Guess who wins?
- The Hero approach says we will rise to the challenge, but at what cost?
- How to get 2 person-days per week from key people?
- ID the tasks; set priorities; allocate resources.
- Use a Resource Manager with real authority.
- Schedule using a tool so you have credibility.
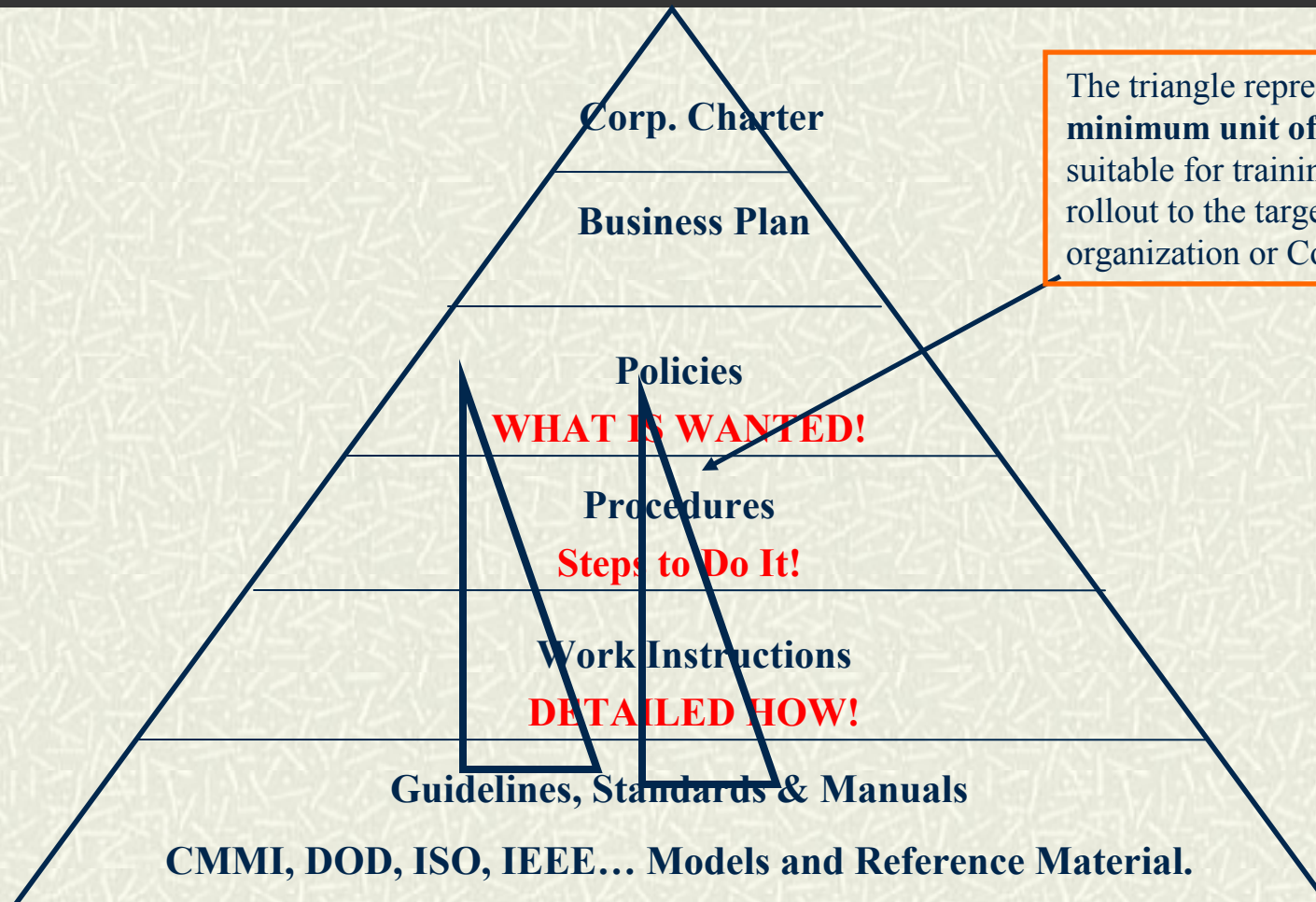- Use Process Thursdays.

Responsible, Accountable, Authority.

- Give people clear assignments in writing
- Make them responsible for completion
- Agree on due dates
- Hold them accountable if they have problems
- Give them the authority to get the resources they need. Good Luck on this one!

Management by Project

- Not the same as a PMO
- Do a plan, follow the plan, change the plan.
- Track progress.

- If you are not doing Management By Project you're in trouble.

Deploying Policies and Procedures
Business Document Pyramid

Corp. Charter

Business Plan

Policies

WHAT IS WANTED!

Procedures

Steps to Do It!

Work Instructions

DETAILED HOW!

Guidelines, Standards & Manuals

CMMI, DOD, ISO, IEEE… Models and Reference Material.

The triangle represents the **minimum unit of work** suitable for training and rollout to the target organization or Company.

Rollout Minimum Unit of Work

The principle in control is: People deserve and need the infrastructure that should surround any process.

1. Policy - Approved by Corp Officer and Issued but not Effective.

2. Process Work Flow Diagram, Completed Procedures, Checklists, Work Instructions, Forms, reports. All Approved by SEPG

3. Needed Standards or Guidelines are in our Asset library.

4. TRAINING - TRAINING - TRAINING!!!!

5. Rollout to user community.

6. Enforcement and feedback!!

Boot-Strap Consortiums

- Consortium - A group formed to undertake an enterprise beyond the resources of any one member!
- Reach agreement with Non-Disclosure Agreement's, non-compete, no staff raiding, etc.
- Share plans, policies, procedures, checklists, etc after sanitizing them.
- Best practice = Build sharable library on an accessible server.
- Use your local SPIN! Isn't this a great use for SPIN??

How Important is it to your career to get this right????

This Could be Your Next Job Assignment.

-Viktor-

Photo by Vincent Laforet / The New York Times

Just Kidding!

Process Areas Selected as Hi-Priority - Balanced Minimization - Value Add

- **1 - Base Practices**
- **1 - REQM - Requirements Management**
- **2 - CM - Configuration management**
- **2 - PPQA - Process and Product Quality Assurance**
- **3 - MA - Measurement and Analysis**
- **3 - PP - Program and Project Planning**
- **3 - PMC - Project monitoring and control**
- **==LEVEL 2 PA's == Continuous Representation ==**
- **4 - VER - Verification**
- **4 - VAL - Validation**
- **4 - RD - Requirements Development**
- **5 - OT - Organizational Training**
- **4 - TS - Technical Solutions**

What's in a Project Plan for Each PA?

- **All the normal project stuff.**
  - Approach, Tasks, Milestones, Skills, Implementation Plan, Deliverables, Schedule, Meetings, Issues, Risks, Change Control, WBS, Baseline, measurements, process improvement thru feedback.
  - **FOCUS ON DELIVERABLES!!!**
- **Implementation Plan Approach** - How will we take the deliverables from the project and roll the processes and documentation out to the full company. Use the minimum Unit of Work - It Always works.

What's in a Project Plan for a PA?

- **ID the Deliverables -**
  - Policy for each GG and SG, maybe more, maybe less.
  - Procedures for Best Practices. Tailor as needed.
  - Templates for Forms and checklists to support procedures.
  - Bidirectional Traceability Control tables.
  - Change control Process.
  - Etc.

- We need the team manager to figure out what the deliverables are, based on the PA. Most of the project work flows from Deliverables!

What is a Policy?

1. A predetermined course of action established as a guide toward accepted business strategies and objectives.

2. A policy is a basic guide to action. It forecasts expected actions in response to anticipated events.

- CPI will never be done because we can't think of every situation and write a policy on how to react.

Business Document Pyramid
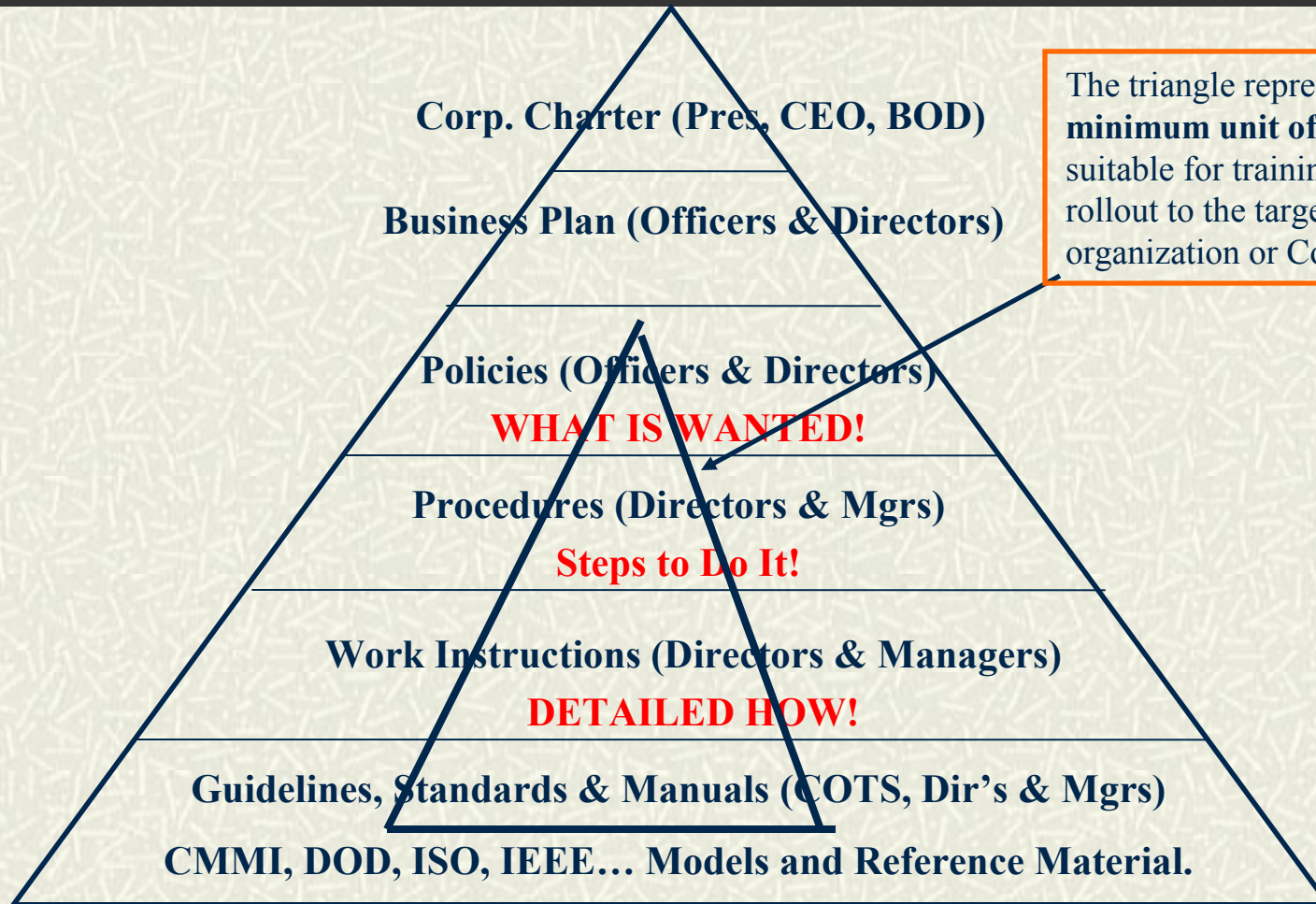
Corp. Charter (Pres, CEO, BOD)

The triangle represents the **minimum unit of work** suitable for training and rollout to the target organization or Company.

Business Plan (Officers & Directors)

Policies (Officers & Directors)
WHAT IS WANTED!

Procedures (Directors & Mgrs)
Steps to Do It!

Work Instructions (Directors & Managers)
DETAILED HOW!

Guidelines, Standards & Manuals (COTS, Dir's & Mgrs)

CMMI, DOD, ISO, IEEE… Models and Reference Material.

Policies Help The Working Person

- It does NOT tell people HOW to proceed.
- It is WHAT management wants.
- It helps supervisors and operations people to make sound decisions w/o top execs.
- It provides fair and equal treatment of all.
- It provides a unity of purpose. It codifies a decision that can be used widely.

Goals to Policies

- How to convert a SG to a Policy.
- Elaboration of each policy section.
  - Policy Statement - Trace to a Goal
  - Scope - Trace to SP's.
  - Authority - Create New Roles?
  - Definitions And other Boilerplate - Hot links to your Asset Library.

PPQA

SG 1 & 2

Specific
and Generic
Practices
that relate
to SG 1 &
2.

	1.1.1 **Policy**	Effective Date:	Number: **QA-POL-001-03**
		Date Issued:	**Page 1 of 1**
		Prepared By: R. Flaherty	Resp. Dept.: QA
		Supercedes: All prior versions of QA Policy	Ref. Policy #:
		Approved By:	
Title: Policy for Process and Product Quality Assurance			

Policy Statement:

This policy requires that we objectively evaluate the adherence of performed processes, work products and services against applicable process descriptions, standards, and procedures, and that noncompliant issues are tracked with a viable resolution and the quality issues are communicated to the staff, management, and customers of OnBoard Software Inc. (OBSI).

Scope:

The scope of this policy is to:

1. Establish and maintain a plan for performing the PPQA process.
2. Ensure that adequate resources are performing the PPQA process, developing the work products, and providing the services of the process.
3. Audit the designated performed processes, work products, and services against the applicable process descriptions, standards and procedures by providing evaluation reports to the staff, management, and customer.
4. Identify, analyze, and document nonconforming issues until a viable resolution with the stakeholder, management and the customer is in place to preclude any negative quality trends.
5. Establish a training agenda and ensure resources are identified, trained, and qualified to perform QA activities.
6. Place designated PPQA work products and processes under configuration management.
7. Monitor and control the PPQA process against the plan and with identified relevant stakeholders take appropriate corrective actions.
8. Ensure that all organizational expectations for process and product quality assurance is practiced and noncompliant issues are identified, documented, and conveyed to the staff, management, and customer.
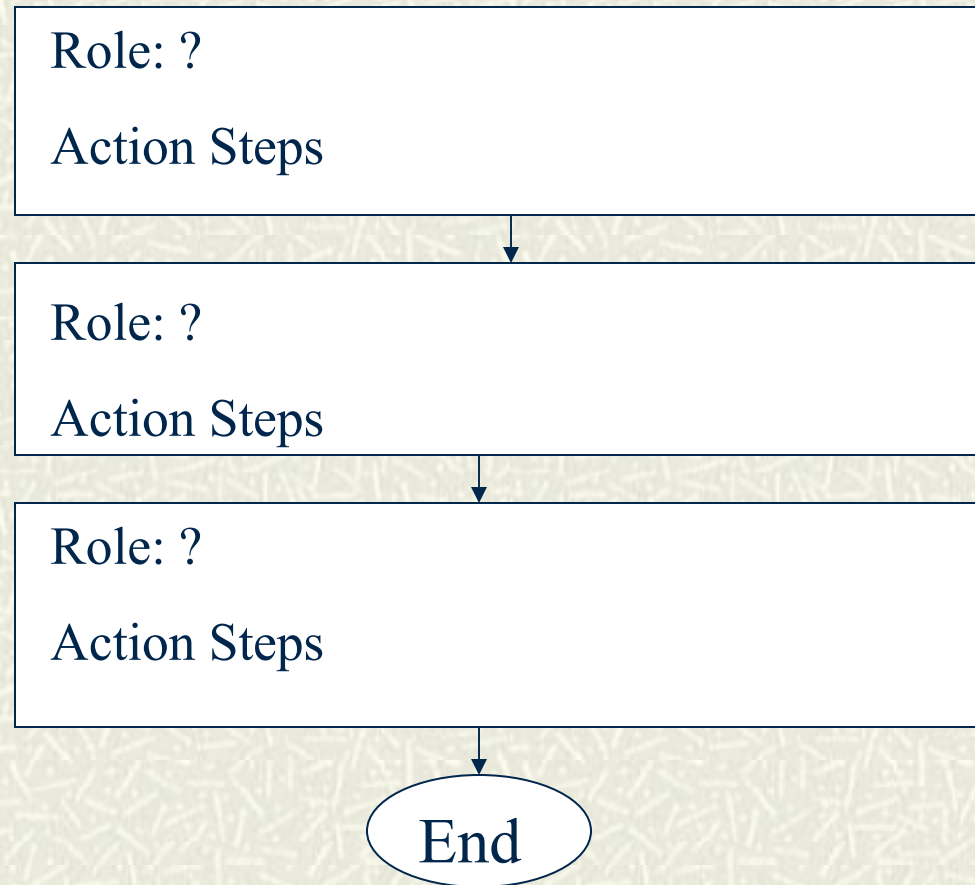
Work Flow Diagrams

- Important input to procedure writing.
- Block Diagrams
- Role driven
- Keep It Stupidly Simple (KISS)
- not Keep It Simple Stupid.

Format of Workflow Diagram.

Info Box:

Drivers, inputs, outputs, forms, exit criteria

Role: ?

Action Steps

Role: ?

Action Steps

Role: ?

Action Steps

End

Procedure Construction

- **Inputs - Drivers, Work Flow Diagrams, forms, reports, brainstorming sessions, roles, regulations, timing, start and end points, hand-offs per role, exit criteria.**

- Gather all the above - Gestalt - Assimilate.

- What is the 'driver' of the process? A Form? Customer?

- Start with the driver and proceed role by role.

Review Procedure Template

- Use Playscript Procedure Methodology.
- Be brief. 2-3 pages max.
- Use action verbs as first word.
- Always hand-off from role to role. Why?
- Simple branching is OK.
- Nothing else.

	1.1.1 **Procedure**	Effective Date:	Number: **ADMIN-TEMP-003-02**
		Date Issued:	**Page 1 of 1**
		Prepared By:	Resp. Dept.:
		Supercedes:	Ref. Policy #:
		Approved By:	

Title: **Procedure Name**

Discussion/Purpose:

Actor/Function	Description of Action
1st Actor	1. 1st action by 1st actor 2. 2nd action by 1st actor. 3. Last action in each section must tell how the handoff is to occur.
2nd Actor	4. 1st action by 2nd actor. 5. 2nd action by 2nd actor 6. 3rd action by 2nd actor. Handoff to next Actor.
	End of Procedure
	Note: each set of actions for each Actor should be in a separate table row. Number Actions sequentially throughout procedure. No need to number Actors. Remove this note/row.

End of Document

Other Support Artifacts

- Checklists
- Audit Forms
- Work Instructions
- Log Books
- Asset Library

Questions????