

Production Management (ME-419)

Module 3 – Supply Management

Authorized MPS

Amin Kaboli

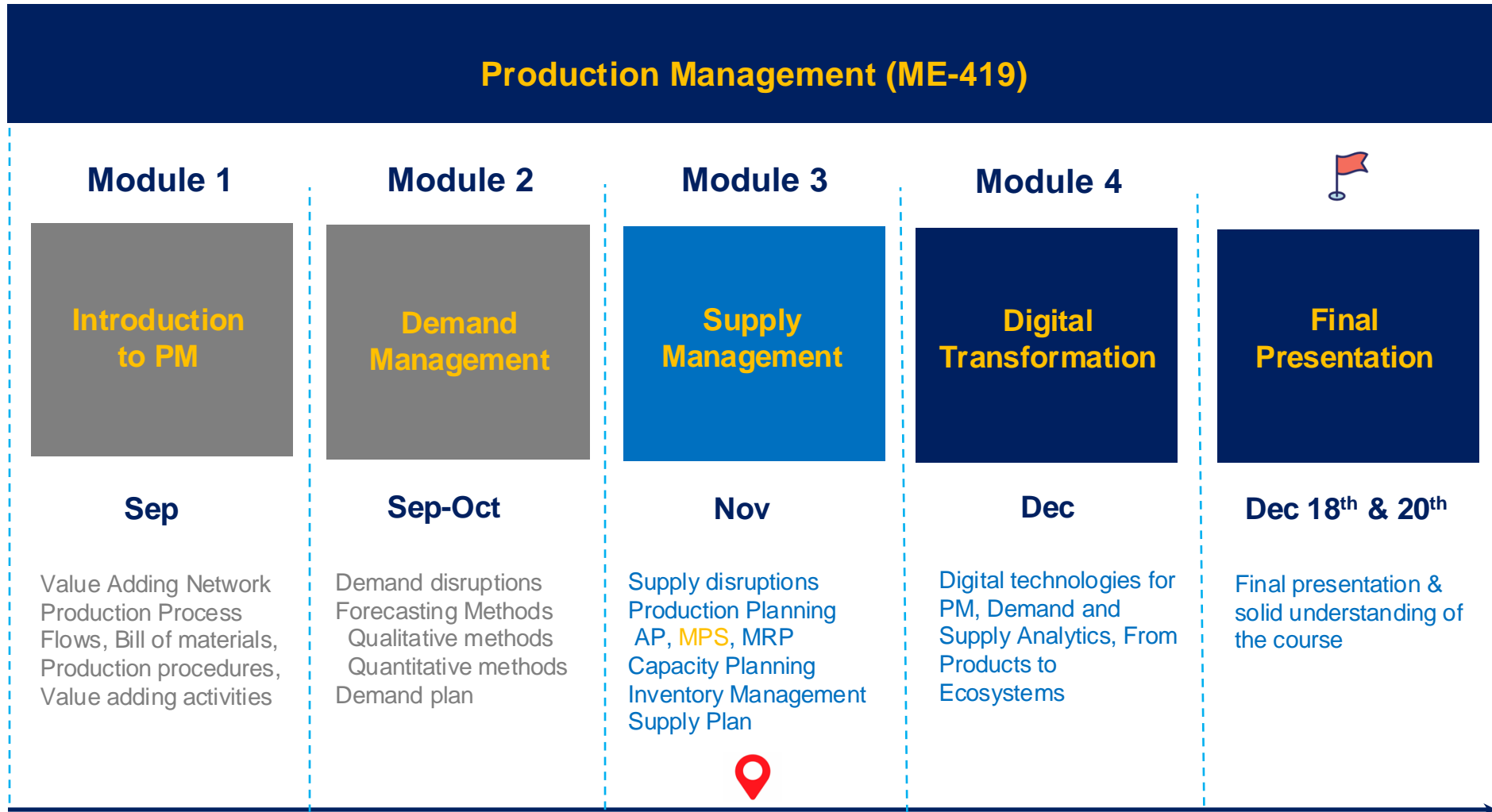
Week 9 – Session 1 – Nov 08th, 2024

Course Framework



Business plan

Strategic plan
Financial plan



Planning a Dinner Party

- Required activities:

1. Plan the menu

2. Determine the number of guests

3. Review the recipes for each item on the menu

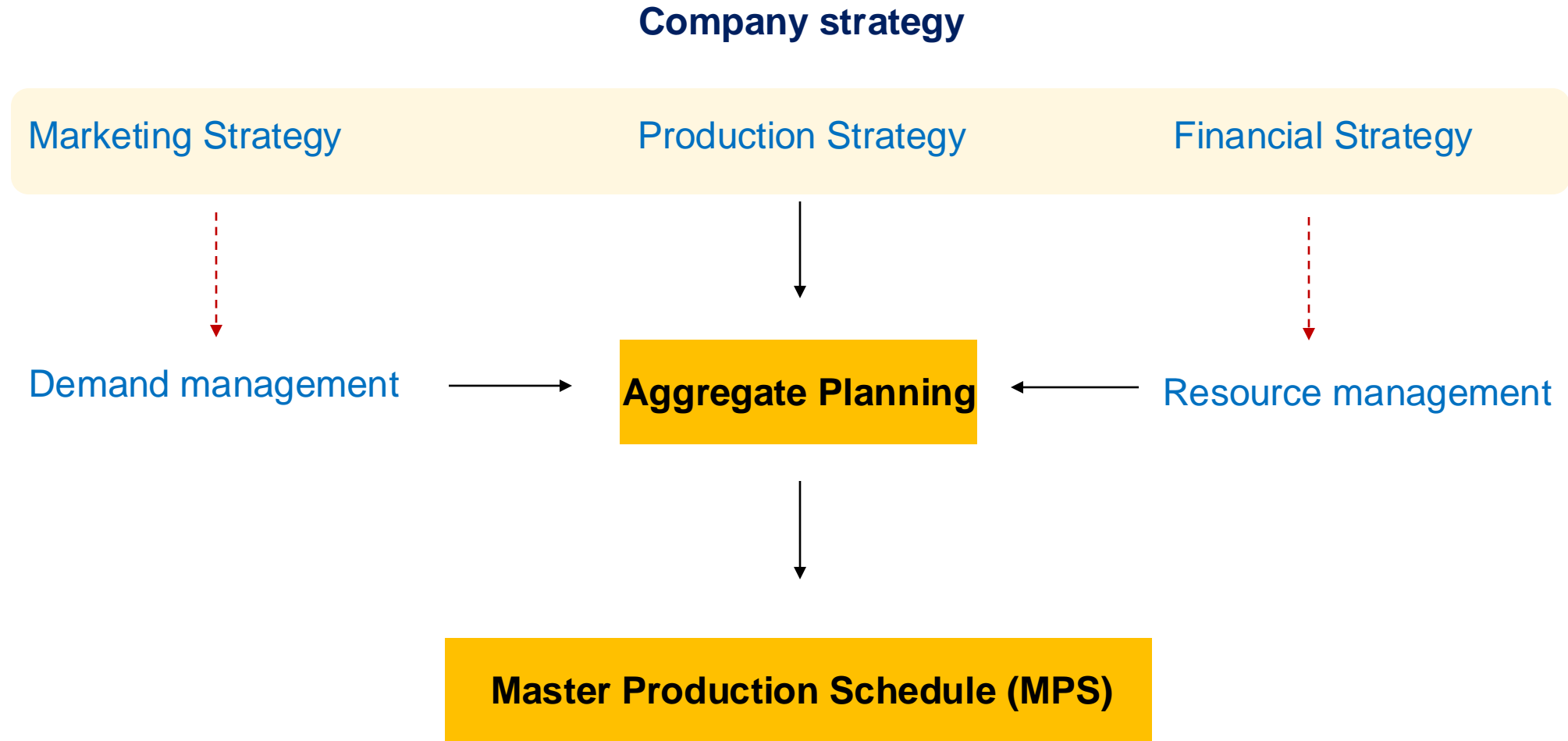
4. Check the kitchen for what you already have

5. Purchase required materials

6. Dinner is ready, let's party



Aggregate planning - Extended



Disaggregation



From Proposed to Authorized MPS

1 **Proposed MPS:** The production planner develops a **proposed MPS**.

2 **Feasibility check:** The Production planner uses **rough cut capacity planning technique** to calculate whether the company has the capacity to meet the proposed MPS.

*If the **proposed MPS is feasible**, s/he further evaluates effective use of resources.

*If the **proposed MPS is not feasible**, the proposed MPS is modified or capacity is expanded.

3 **Authorized MPS:** If the proposed MPS is accepted, it becomes **the authorized MPS**.

Note: the authorized MPS is a critical input into the Material Requirement Planning (MRP).

MPS Feasibility Check

- Compare the MPS to the aggregate plan
- If MPS needs additional resources;
 - Company can increase its capacity with overtime, temp workers, subcontracting, or by using alternative manufacturing processes.
- Otherwise;
 - Company may not achieve the objectives of the marketing plan and consequently, the business plan.

From Proposed to Authorized MPS



1

Proposed MPS: The production planner develops a **proposed MPS**.



2

Feasibility check: The Production planner uses **rough cut capacity planning technique** to calculate whether the company has the capacity to meet the proposed MPS.

*If the **proposed MPS is feasible**, s/he further evaluates effective use of resources.

*If the **proposed MPS is not feasible**, the proposed MPS is modified or capacity is expanded.



3

Authorized MPS: If the proposed MPS is accepted, it becomes **the authorized MPS**.

Note: the authorized MPS is a critical input into the Material Requirement Planning (MRP).

Use of Authorized MPS

Order promising: process of making order delivery commitment.

Week	1	2	3	4	5	6	7	8	9	10	11	12
Sales forecast	50	50	50	50	75	75	75	75	50	50	50	50
Projected Available (110)	60	10	-40									
MPS	0	0	0	0	0	0	0	0	0	0	0	0

Available to promise = uncommitted portion of a company's inventory and planned production, maintained in MPS to support order promising.

Completed MPS

Week	1	2	3	4	5	6	7	8	9	10	11	12
Sales forecast	50	50	50	50	75	75	75	75	50	50	50	50
Projected Available (110)	60	10	85	35	85	10	60	110	60	10	85	35
MPS	0	0	125	0	125	0	125	125	0	0	125	0

Projected available = Beginning inventory + MPS shipment – Sales forecast

Extended MPS Record

Orders promised to customers for delivery in given time period.

Week	1	2	3	4	5	6	7	8	9	10	11	12
Sales forecast	50	50	50	50	75	75	75	75	50	50	50	50
Customer orders	35	25	25	20	0	15	0	0	10	0	0	10
Projected Available (110)												
ATP												
MPS	0	0	125	0	125	0	125	125	0	0	125	0

Uncommitted portion of a company's inventory and planned production, maintained in MPS to support order promising.

Projected available = ?

Case 1: New Customer Orders

Marketing director had a meeting with Head of Purchasing at Globus in Zurich to present the product and discuss the possibility to sell as pilot sales in their shop.

Globus purchasing team liked the product and asked for 200 units delivery in period 5. the marketing director calls you on the way back to Lausanne and brief you about the meeting and ask you:

Q: is it possible to deliver 200 units in period 5?



Revised ATP MPS Record

Week	1	2	3	4	5	6	7	8	9	10	11	12
Sales forecast	50	50	50	50	75	75	75	75	50	50	50	50
Customer orders	35	25	25	20	200	15	0	0	10	0	0	10
Projected Available (110)	60	10	85	35	-40	-115	-65	-15	-65	-115	-40	-90
ATP	50		80		-90		125	115			115	
MPS	0	0	125	0	125	0	125	125	0	0	125	0

Projected available = Beginning inventory + MPS shipment – Max (Sales forecast, Customer orders)

ATP = Beginning inventory + MPS shipment – Customer orders before next shipment

Revised ATP Record - Solution

Week	1	2	3	4	5	6	7	8	9	10	11	12
Sales forecast	50	50	50	50	75	75	75	75	50	50	50	50
Customer orders	35	25	25	20	200	15	0	0	10	0	0	10
Projected Available (110)	60	10	85	35	-40	-115	-65	-15	-65	-115	-40	-90
ATP	50		80		-90		125	115			115	
MPS	0	0	125	0	125	0	125	125	0	0	125	0

Projected available = Beginning inventory + MPS shipment – Max (Sales forecast, Customer orders)

ATP = Beginning inventory + MPS shipment – Customer orders before next shipment

Second Revision of ATP Record - Solution

Week	1	2	3	4	5	6	7	8	9	10	11	12
Sales forecast	50	50	50	50	75	75	75	75	50	50	50	50
Customer orders	45*	25	105*	20	110*	15	0	0	10	0	0	10
Projected Available (110)	60	10	30	-20	-5	-80	-30	20	-30	-80	-5	-55
ATP	40		0		0		125	115			115	
MPS	0	0	125	0	125	0	125	125	0	0	125	0

Projected available = Beginning inventory + MPS shipment – Max (Sales forecast, Customer orders)

ATP = Beginning inventory + MPS shipment – Customer orders before next shipment

Case 2: New Customer Orders

Globus purchasing team calls 1 hour after the meeting and asks for extra units! 50 units delivery in period 4. the marketing director calls you again happily and asks you:

Q: is it possible to deliver 50 extra units in period 4?



Third Revision of ATP Record

Week	1	2	3	4	5	6	7	8	9	10	11	12
Sales forecast	50	50	50	50	75	75	75	75	50	50	50	50
Customer orders	45*	25	105*	70	110*	15	0	0	10	0	0	10
Projected Available (110)	60	10	30	-40	-25	-100	-50	0	-50	-100	-25	-75
ATP	40		-50		0		125	115			115	
MPS	0	0	125	0	125	0	125	125	0	0	125	0

Projected available = Beginning inventory + MPS shipment – Max (Sales forecast, Customer orders)

ATP = Beginning inventory + MPS shipment – Customer orders before next shipment

Fourth Revision of ATP Record

Week	1	2	3	4	5	6	7	8	9	10	11	12
Sales forecast	50	50	50	50	75	75	75	75	50	50	50	50
Customer orders	45*	25	105*	20	110*	15	50	0	10	0	0	10
Projected Available (110)	60	10	30	-20	-5	-80	-30	20	-30	-80	-5	-55
ATP	40		0		0		125	65			85	
MPS	0	0	125	0	125	0	125	125	0	0	125	0

Projected available = Beginning inventory + MPS shipment – Max (Sales forecast, Customer orders)

ATP = Beginning inventory + MPS shipment – Customer orders before next shipment

Case 3: New Customer Orders

Globus purchasing team calls for the third times and asks for another extra units! 30 units delivery in period 12.

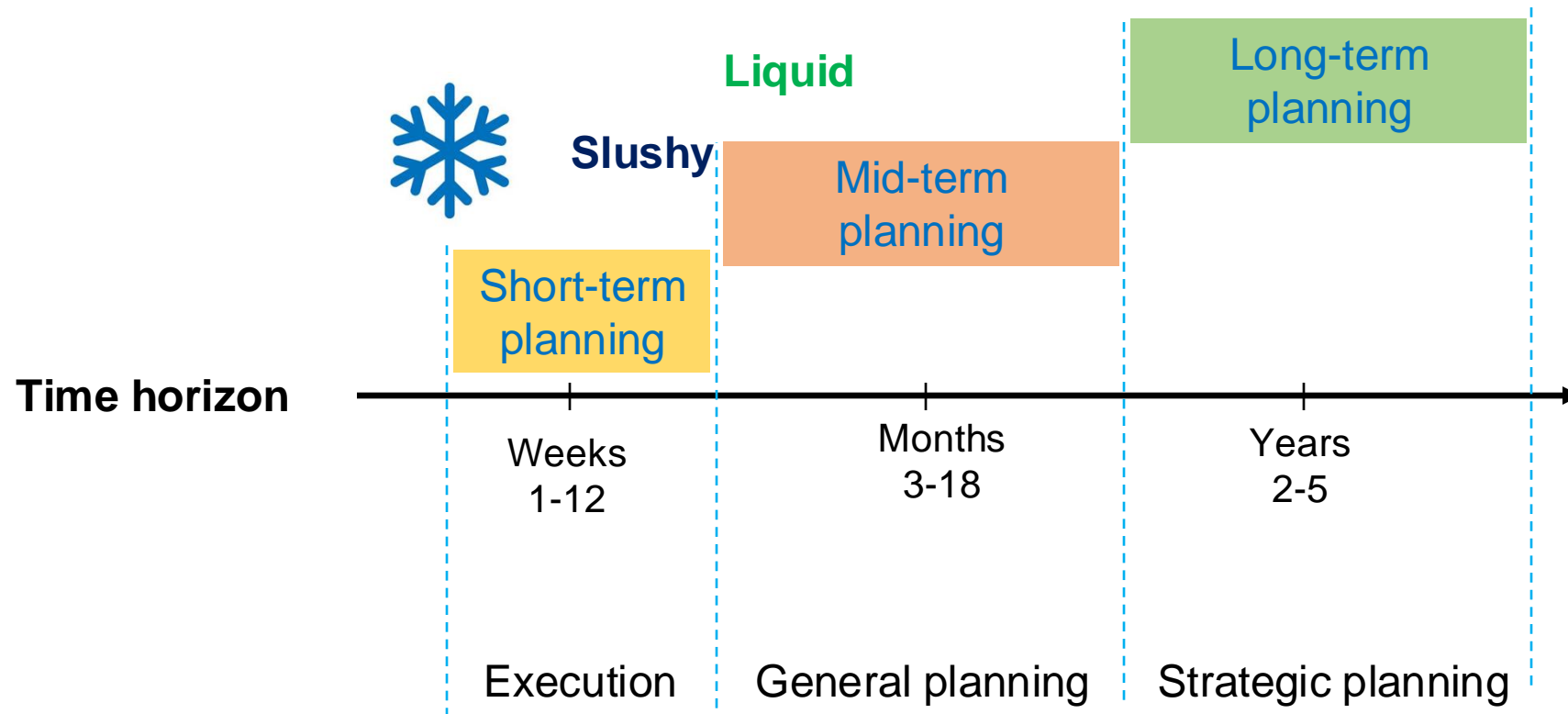
Q: is it possible to deliver 50 extra units in period 4?



Exercise 3 – Develop The Authorized MPS



Time Fence and Plan Horizon



Production Management (ME-419)

Guest Speaker Demand Planning & Simulation Game

Amin Kaboli

Week 9 – Session 2&3 – Nov 08th, 2024

Production Management (ME-419)

Coaching Rooms

Amin Kaboli

Week 4 – Session 4 – Oct 04th, 2024

Please Follow Your coaches to Your Designated Rooms

Coaches



Saria
GCA 330



Joao
GCA 331



Xavier
GRA 332

The Art of Giving and Receiving Effective Feedback



Feedback is a gift



Feedback/comments are
always welcome

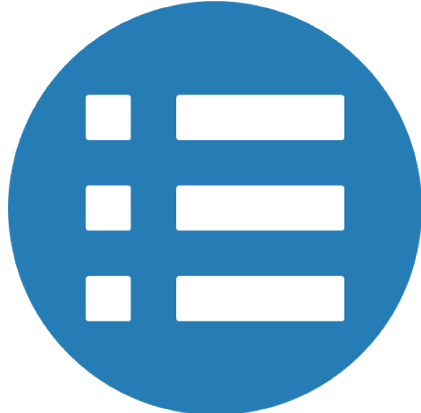
Giving Effective Feedback



Respectful

Ask for permission

May I share my observation



Fact-based

Share facts/ your feelings

What I observed/felt is that ...



Constructive

Stay focused on growth

What I suggest is that ...



Concise

Be to-the-point and short

Max three key points



Open

Be open to any reaction

I respect your feeling ...

Receiving Effective Feedback



Receive the gift

Be open and receptive

I appreciate your feedback



Listen

Listen to listen!

The goal is to listen not to answer, no interruption (zip it)



Understand

Focus on THE message

The goal is to understand, ask questions, clarify, repeat key points, ...



Decide

You always have a choice

Thank you, I have never seen it this way
OR
Thank you, let me reflect and get back to you?



Follow up

Reach a common understanding

There are many ways to follow up: revise the work, set up a meeting, ...