

LEARNING NOTES

AS SUPPLEMENT TO

AACE INTERNATIONAL PLANNING & SCHEDULING PROFESSIONALS CERTIFICATION GUIDE

PLANNING
DEVELOPMENT

PLANNING
PRODUCT

SCHEDULE
DEVELOPMENT

CREATING
SCHEDULE

SCHEDULE MAINTENANCE /
CONTROLLING

SCHEDULE OUTPUT AND
DELIVERABLES

ELMA HUSIC

TELECOMMUNICATION ENGINEER

ELECTROTECHNICIAN DIPLOMA POWER SECTION

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SYMBOLS



REPEATED DEFINITION

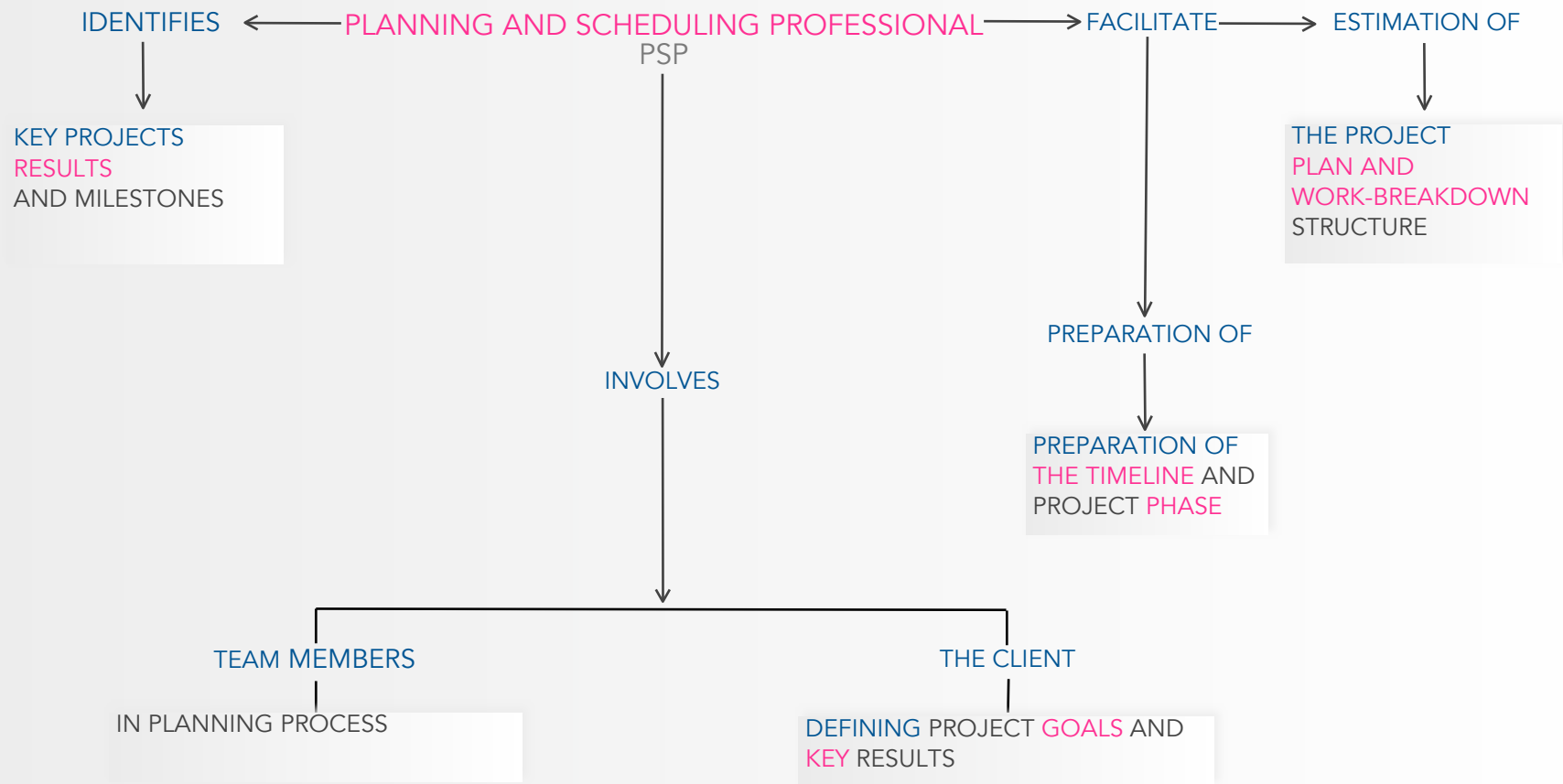


AACE INTERNATIONAL RECOMMENDED PRACTICE RP 10S-90 COST ENGINEERING

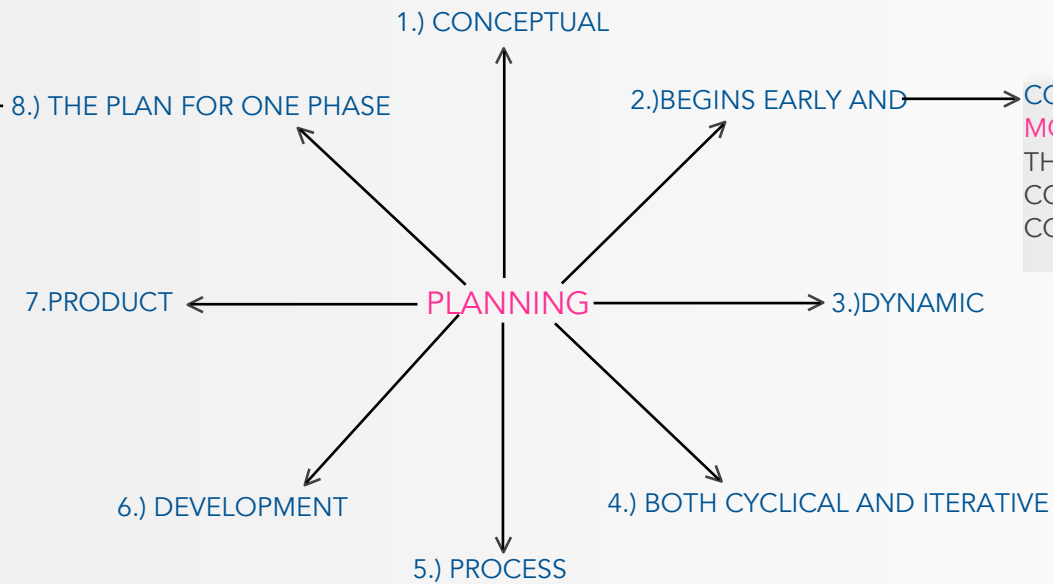


PLANNING & SCHEDULING
IS DYNAMIC AND IS AFFECTED BY
ADVANCES IN PHILOSOPHIES,
METHODOLOGIES AND
TECHNOLOGIES.

INTRODUCTION TO PLANNING AND SCHEDULING PROFESSIONAL



IS THE KEY TO DEVELOPING A PLAN FOR THE NEXT PHASE, AS WELL AS FOR THE PROJECT AS WHOLE.



PLANNING
IDENTIFICATION OF THE PROJECT OBJECTIVES, THE ORDERLY ACTIVITIES NECESSARY TO COMPLETE PROJEC. (THINKING PART)

1.) WHAT MUST BE DONE?
2.) HOW IT WILL BE DONE?
3.) WHO WILL DO IT?

THE SCOPE DEVELOPED
INFORMATION BECOMES MORE
DETAILED

MUST BE APPROPRIATE TO
THE PHASE OF THE WORK

THE ITERATIVE REVIEW, DEVELOPMENT AND
MODIFICATION OF CYCLE IS CONSTANT
THROUGHOUT THE LIFE OF PROJECT.

PLANNING PROCESS

DEVELOP

THE ELEMENTS OF PLAN

WHICH

MUST BE EQUALLY
WEIGHTED

TO ACHIEVE A BALANCED
AND USABLE PRODUCT

REPEATED

WHIT EACH PHASE OF WORK EFFORT
AN DEVELOPMENT THROUGHOUT THE
PROJECT'S LIFE CYCLE

WHEN CONDITIONS CHANGE
FOR THE PLAN OR ANY OF ITS
ELEMENTS

THE PLANNER SHOULD
RE-EXAMINE AND UPDATE IT.

EFFECTIVE
IMPLEMENTATION OF A PLAN
RESULTS IN SCHEDULE.



THE PLAN OF THE ONE PHASE OF PROJECT OFFERS A **PATTERN** FOR DEVELOPING THE PLAN OF THE NEXT PHASE OF THE PROJECT AS WELL AS THE PROJECT AS A WHOLE

RECOGNISE THAT IT IS **DYNAMIC PROCESS REPEATED** THROUGHOUT EACH PHASE OF PROJECT LIFE CYCLE

DELIVERABLES

SHOULD BE EXAMINED AND UPDATED AS NECESSARY

CONDITIONS CHANGE

PLANNING PROCESS

UNDERSTAND FUNDAMENTAL CONCEPTS AND ITS TERMINOLOGY

SCALING MUST BE APPROPRIATE AND **EQUALLY** WEIGHTED TO EACH PHASE OF WORK TO **ACHIEVE** A BALANCED AND USABLE PRODUCT

PLANNING PRODUCT

PLANNING DELIVERABLES

PLANNING OUTPUT

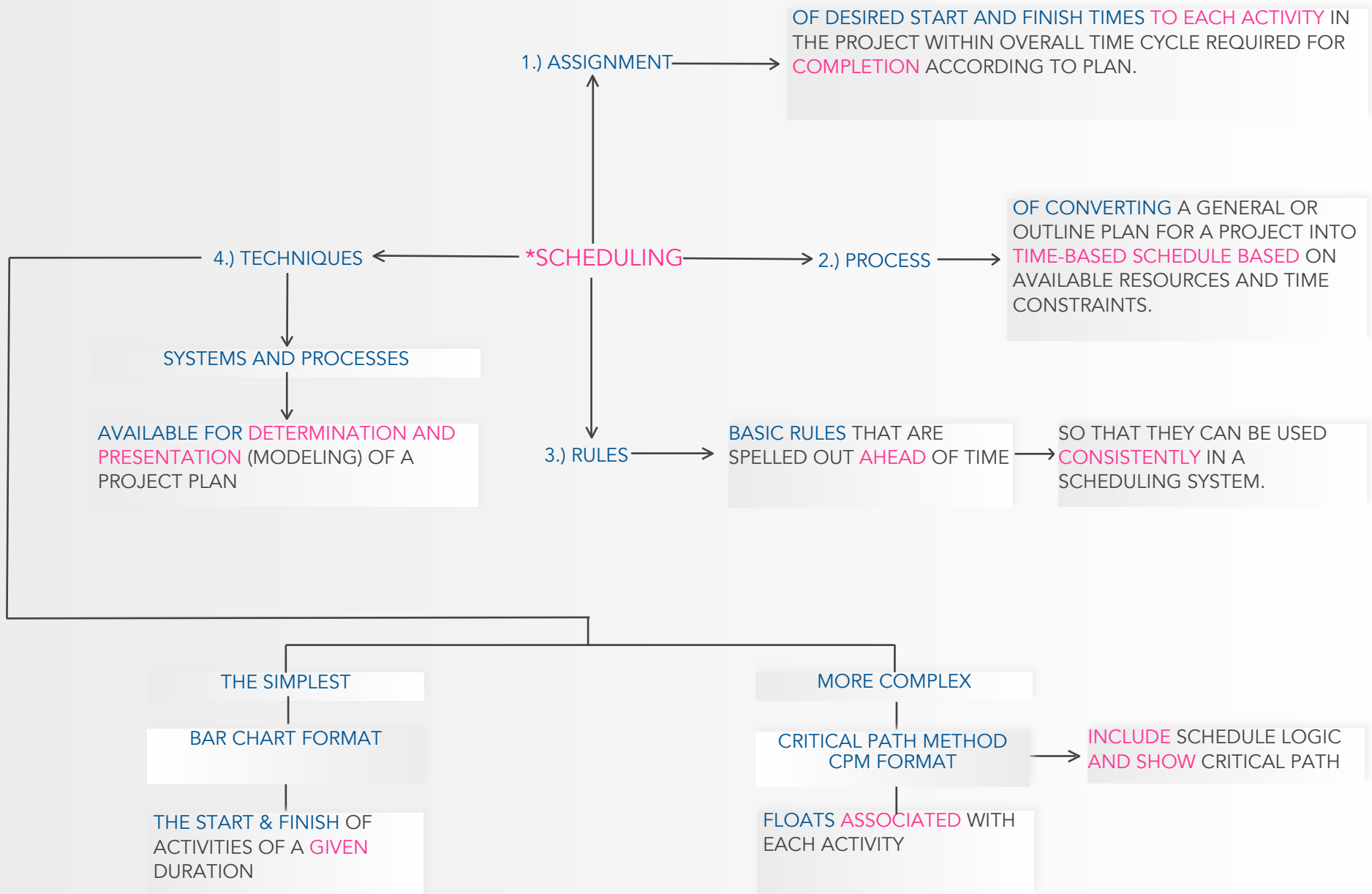
PLANNING DEVELOPMENT

PLANNING CONSIDERATIONS AND CONSTRAINS

PLANNING INPUT DATA

SCHEDULING A TIME SEQUENCE OF ACTIVITIES AND EVENTS REPRESENTED IN OPERATING TIME TABLE

CRITICAL PATH METHOD CPM A SCHEDULING TECHNIQUE USED TO PREDICT PROJECT DURATION BY ANALYSING WHICH SEQUENCE OF ACTIVITIES HAS LEAST AMOUNT OF SCHEDULING FLEXIBILITY



1.PLANNING

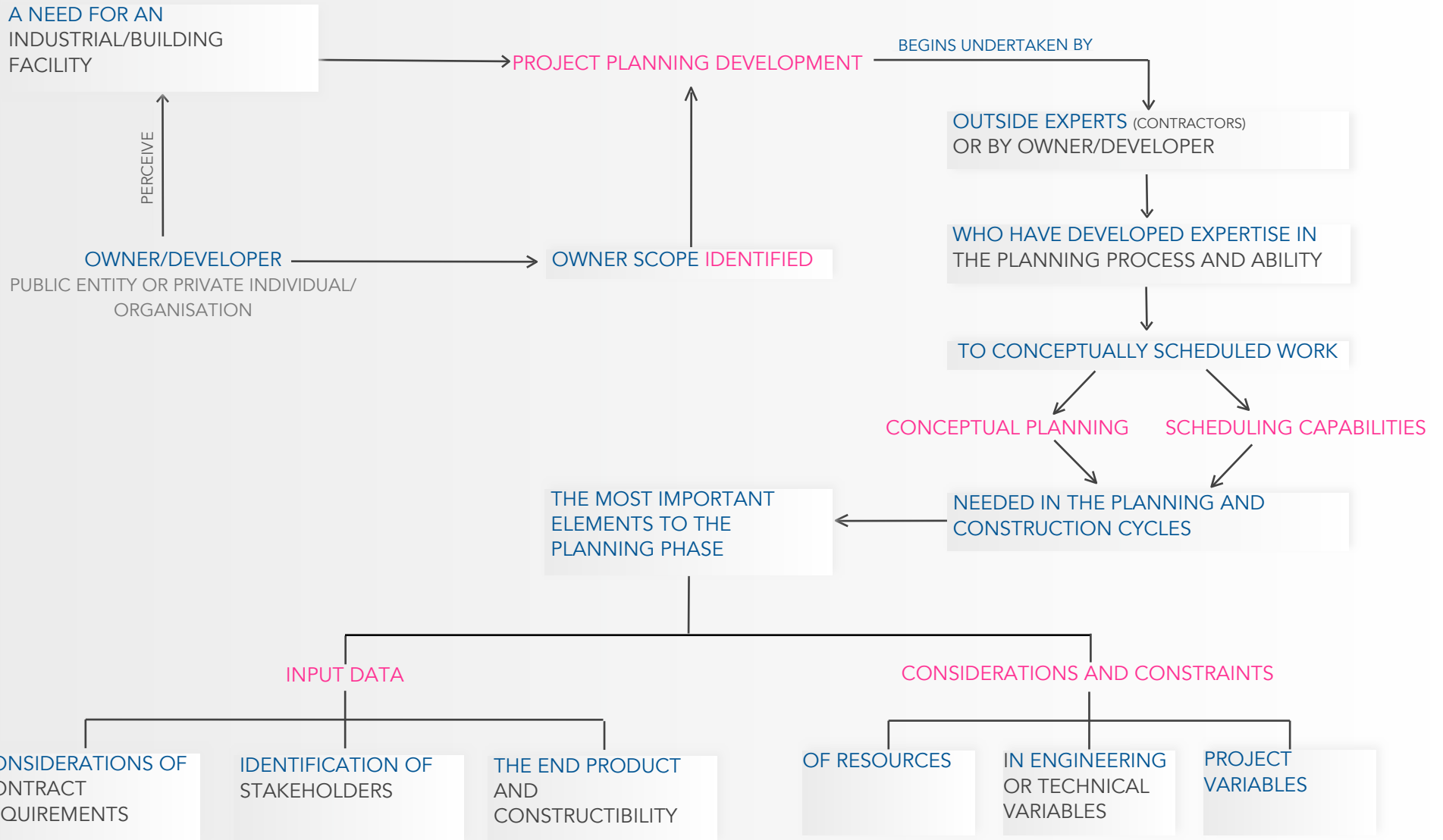
PLANNING

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1.A.PLANNING DEVELOPMENT

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1.A.PLANNING DEVELOPMENT



CONSIDERATIONS AND CONSTRAINTS

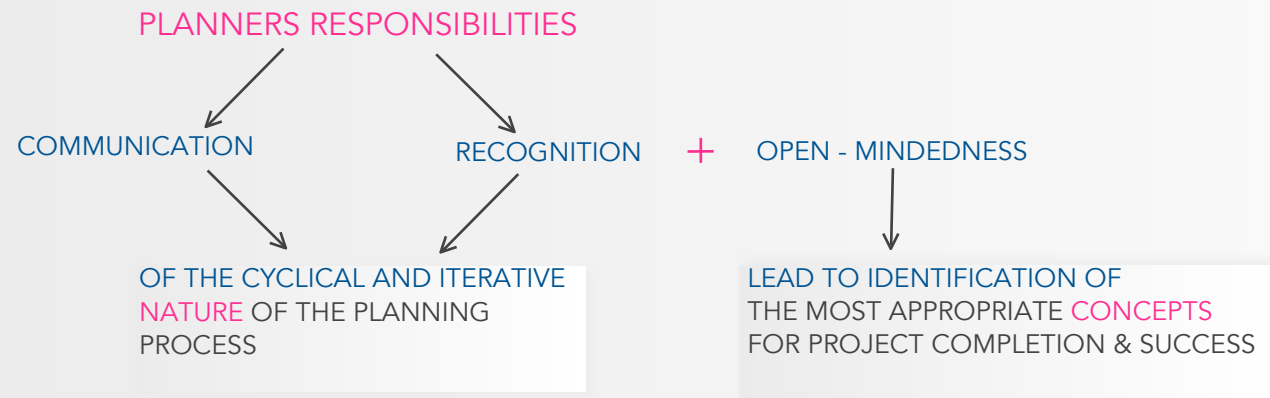
REVIEWED IN CYCLICAL PROCESS IDENTIFIES THE ALTERNATIVES REVIEWED BY VARIOUS STAKEHOLDERS, SO THAT APPROPRIATE DECISION OPTIMALLY SATISFY THE INTERESTS OF THE PARTIES AND THE GOALS OF THE PROJECT.

PLANNING DEVELOPMENT FIVE BASICS STEPS

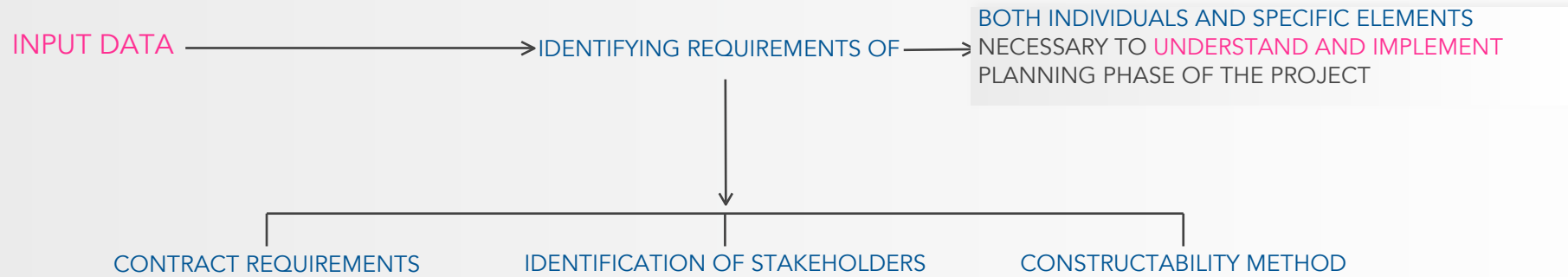
WHAT? THE PHYSICAL FEATURES AND PROJECT OBJECTIVES SCOPE.
 HOW? WORK BREAKDOWN STRUCTURE OR WBS
 WHO? RESOURCE COMMITMENTS AND ORGANISATION BREAKDOWN STRUCTURE OR OBS
 WHEN? TIMELINE INITIALLY AND THEN THE SCHEDULE LATER IN THE PLANNING PROCESS.
 HOW MUCH? BUDGET ESTIMATE

PLANNING IS CONCEPTUAL, DYNAMIC

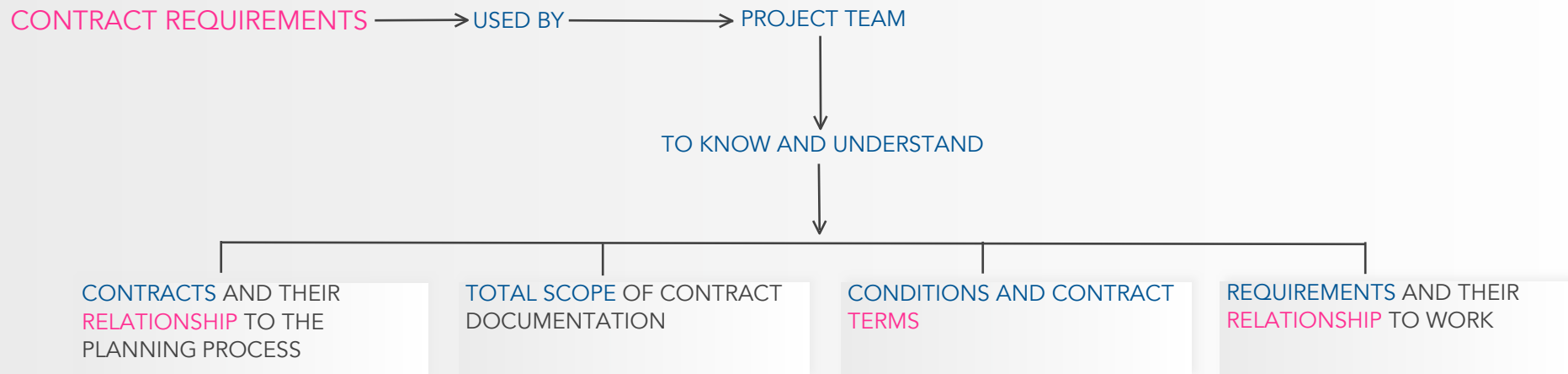
BOTH CYCLICAL AND ITERATIVE AND

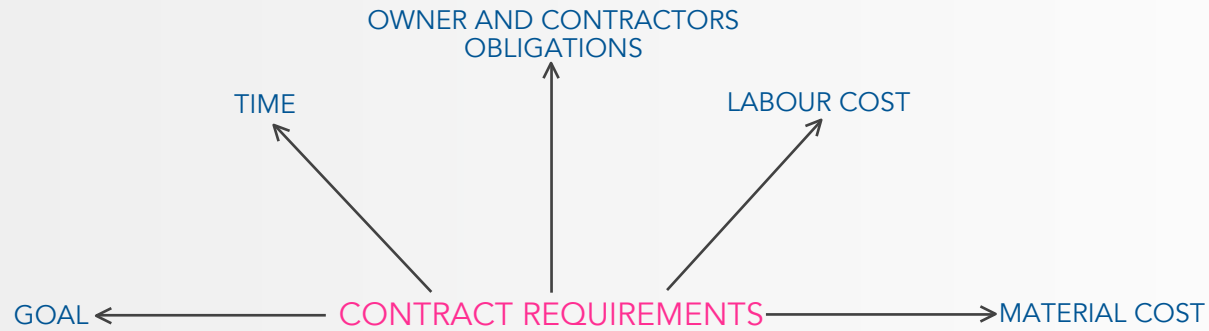


1.1. INPUT DATA



1.1.1.CONTRACT REQUIREMENTS

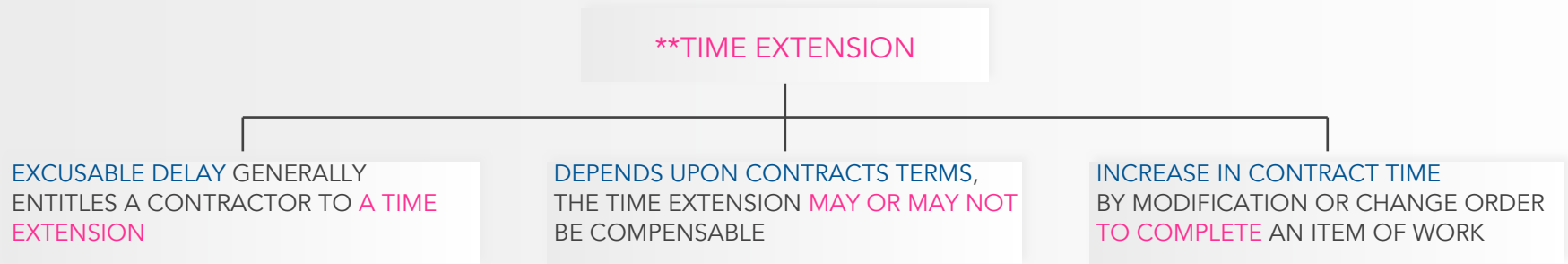




* TIME IS OF THE ESSENCE → OF CONTRACT REQUIREMENT → THAT COMPLETION OF THE WORK WITHIN THE TIME LIMITS IN THE CONTRACT IS ESSENTIAL

↓

FAILURE TO DO SO IS A BREACH FOR WHICH THE INJURED PARTY IS ENTITLED TO DAMAGES



*MATERIAL COST

COST OF EVERYTHING

OF SUBSTANTIAL NATURE THAT IS ESSENTIAL TO THE CONSTRUCTION OR OPERATION OF FACILITY

GENERALLY INCLUDE ALL MANUFACTURED EQUIPMENT AS BASIC PART

INDIRECT

DIRECT

**MATERIAL DIFFERENCE

A CHANGE

IMPORTANT TO

THE PERFORMANCE OF THE WORK

WILL HAVE A MEASURABLE INFLUENCE OR EFFECT ON

THE TIME

COST OF

OR

PROCEDURES FOR THE WORK ON THE CONTRACT

***CONTRACT DOCUMENTS

- THE AGREEMENT
- ADDENDA (WHICH PERTAIN TO THE THE CONTRACTS DOCUMENTS),
- CONTRACTOR'S BID (INCLUDING DOCUMENTATION ACCOMPANYING THE BID AND ANY POST-BID DOCUMENTATION SUBMITTED PRIOR TO THE NOTICE OF AWARD) WHEN IT IS ATTACHED AS AN EXHIBIT TO THE AGREEMENT,
- THE BONDS
- THE GENERAL CONDITIONS
- THE SUPPLEMENTARY CONDITIONS
- THE SPECIFICATION DRAWINGS AS THE SAME ARE MORE SPECIFICALLY IDENTIFIED IN THE AGREEMENT, TOGETHER WITH ALL AMENDMENTS, MODIFICATION AND SUPPLEMENTS ISSUED TO THE GENERAL CONDITIONS ON OR AFTER THE EFFECTIVE DATE OF AGREEMENT.

***MATERIAL REQUIREMENTS PLANNING**

SYSTEM

TIME-PHASED

MAKES RECOMMENDATION TO RESCHEDULE OPEN ORDERS WHEN DUE DATES AND NEED DATES ARE NOT IN THE PHASE

MRP

RECOMMENDATIONS TO RELEASE

**REPLENISHMENT ORDERS FOR

USES

BILLS OF MATERIAL

INVENTORY

OPEN ORDER DATA

MASTER PRODUCTION SCHEDULE INFORMATION

TO CALCULATE REQUIREMENTS FOR MATERIALS



CONTRACT DOCUMENTS

APPLY EQUALLY AS WELL AS TO TO PROJECTS THAT HAVE EVOLVED TO THE DRAFT CONTRACT STAGE OR TO AN ENDEAVOUR THAT HAS YET TO EVOLVE TO A CONTRACT, IF A CONTRACT SHOULD RESULT.



****REPLENISHMENT**

TO RESTORE A SUPPLY OF SOMETHING TO THE FORMER LEVEL OF CONDITIONS

TERMS TO KNOW

BASIC TYPES OF CONTRACTS

COMMON DELIVERY METHODS

CHANGES AND CHANGE MANAGEMENT

PLANNING, SCHEDULING AND REPORTING REQUIREMENTS

VALUE ENGINEERING

CONSTRUCTABILITY

CONTRACT
LEGAL AGREEMENTS BETWEEN TWO OR MORE PARTIES

PMB - Performance Measurement Baseline
MR-Management Reserve

***CONTRACT BUDGET BASELINE (CBB)**
THE BUDGET FOR THE PROJECT AT THE TOTAL CONTRACT LEVEL

$$\text{CBB} = \text{PMB} + \text{MR}$$

UNLESS AN OVER TARGET BASELINE (OTB)

RECONCILES WITH THE PROJECT AUTHORISATION DOCUMENTS FROM THE OWNER.

THE CBB + FEE IS TOTAL CONTRACT VALUE.

HAS BEEN IMPLEMENTED

***PERFORMANCE MEASUREMENT
BASELINE (PMB)**

1.) THE TIME-PHASED BUDGET PLAN AGAINST WHICH CONTRACT PERFORMANCE IS MEASURED.

2.) IN EARNED VALUE MANAGEMENT ACCORDING TO THE ANSI EIA 748 STANDARD, THE ASSIGNMENT OF BUDGET TO SCHEDULED SEGMENTS OF WORK PRODUCE A PLAN AGAINST WHICH ACTUAL PERFORMANCE CAN BE COMPARED.

- TIME BASED PROJECT EXECUTION PLAN AGAINST WHICH PERFORMANCE IS MEASURED.

INCLUDES DIRECT AND INDIRECT COSTS AND ALL COST ELEMENTS. IT ALSO CONTAINS UNDISTRIBUTED BUDGET.

*****OVERTARGET BASELINE**

IN EARNED VALUE MANAGEMENT ACCORDING TO THE ANSI EIA 748 STANDARD, UNDER THE UNUSAL CIRCUMSTANCES A PMB MAY NO LONGE BE REASONABLE FOR PERFORMANCE MEASUREMENT.

WHEN THERE IS A SIGNIFICANT DIFFERENCE BETWEEN "ESTIMATE AT COMPLETION" (EAC) AND "BUDGET AT COMPLETION" (BAC) AT THE TOTAL PROJECT LEVEL.

AN OTB IS INTRODUCED WHEN "THE ESTIMATE TO COMPLETE" (ETC) IS PLANNED FOR TH FUTURE AS BASELINE, RESULTING IN PMB VALUE THAT MAY EXCEED THE CBB.

MAY BE IN CONJUNCTION WITH AN OVER TRAGET SCHEDULE (OTS) AND/OR A SINGLE POINT ADJUSTMENT

****MANAGEMENT RESERVE
(MR)**

1.) AN AMOUNT ADDED TO ESTIMATE TO ALLOW FOR DISCRETIONARY MANAGEMENT PURPOSES OUTSIDE OF THE DEFINED SCOPE OF THE PROJECT, AS OTHERWISE ESTIMATED.

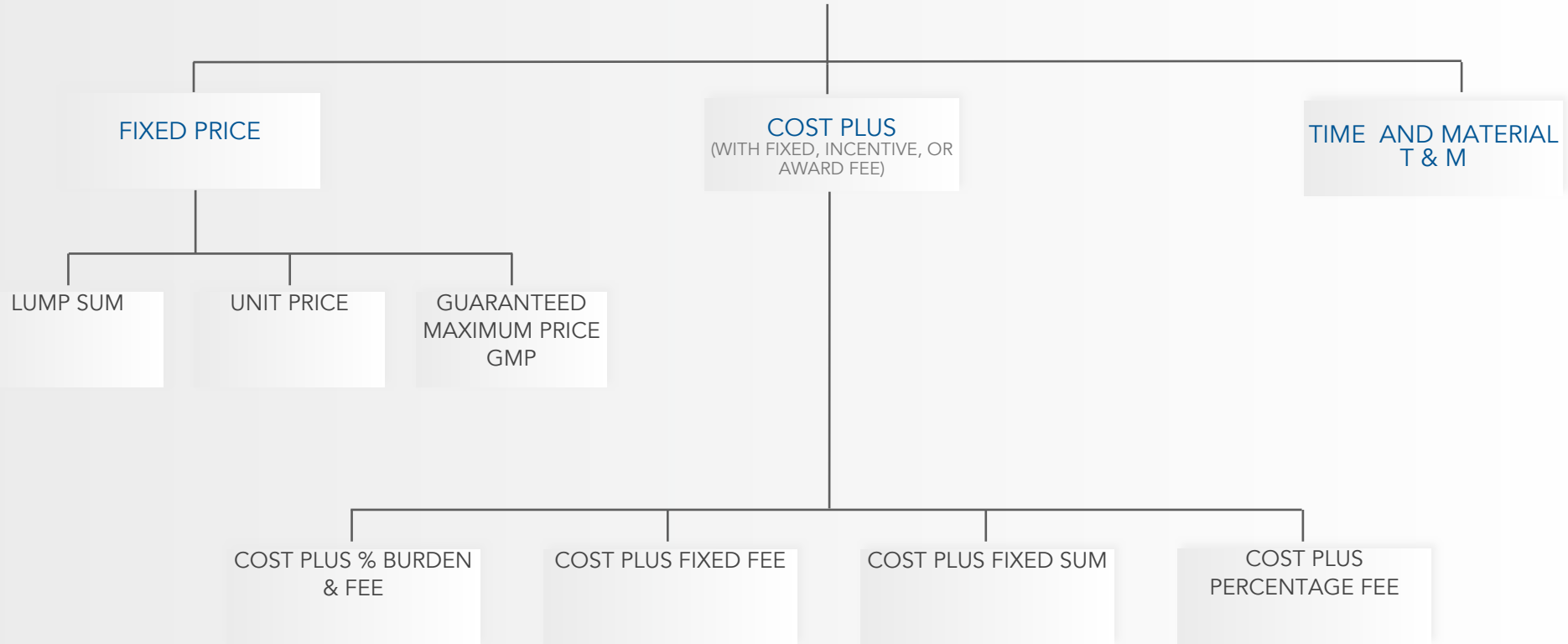
MAY INCLUDE AMONTS THAT ARE WITHIN THE DEFINED SCOPE, BUT FOR WHICH MANAGEMENT DOES NOT WANT TO FOUND AS CONTINGENCY OR THAT CAN NOT BE EFFECTIVELY MANAGED USING CONTINGENCY.

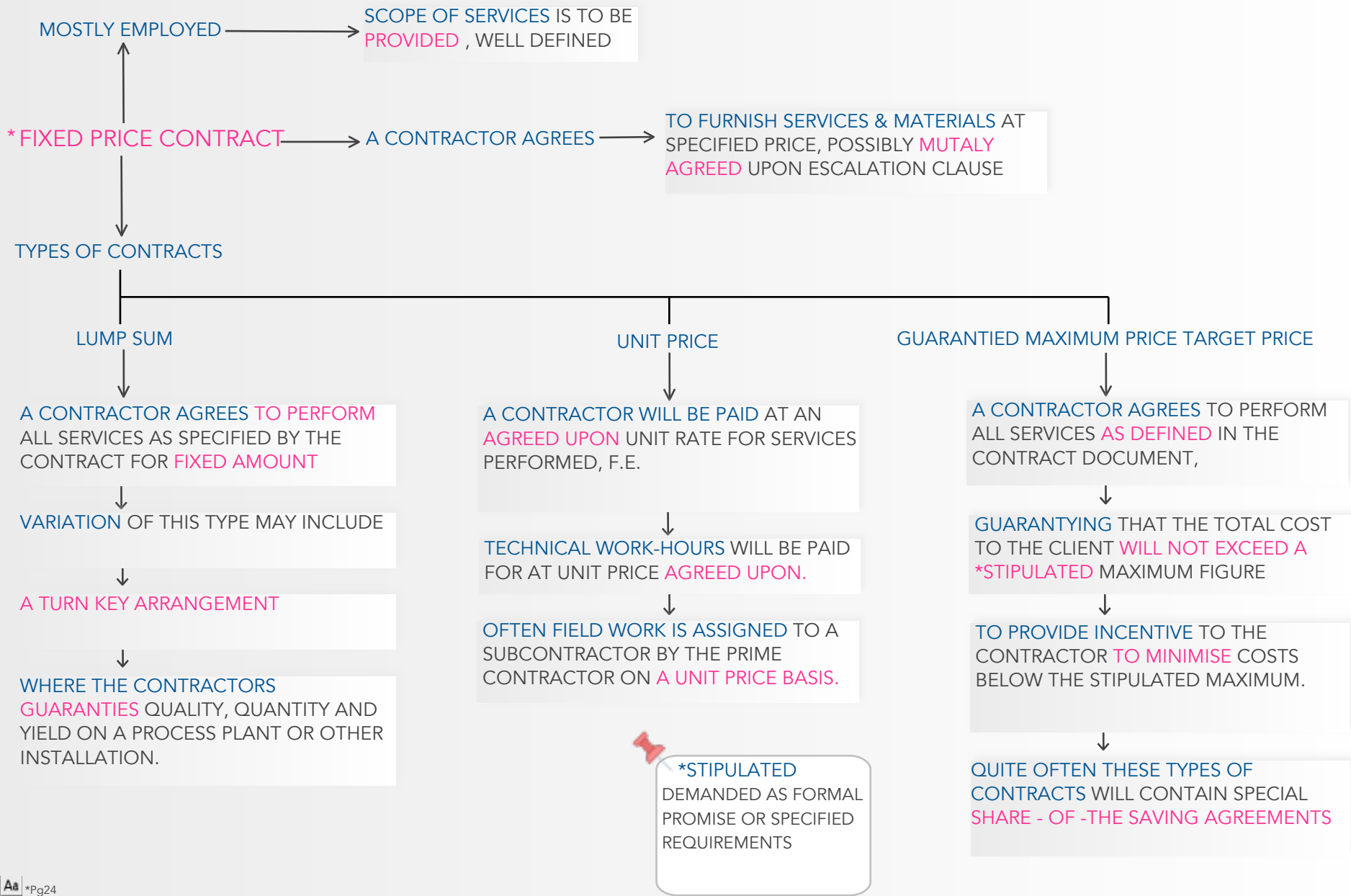
****MANAGEMENT RESERVE (MR)**

2.) IN EARNED VALUE MANAGEMENT ACCORDING TO THE ANSI EIA 748 STANDARD AN AMOUNT HELD OUTSIDE PMB TO HANDLE UNKNOWN CONTINGENCY AT THE TOTAL PROGRAM LEVEL.

HAS NO SCOPE, IS NOT IDENTIFIED TO SPECIFIC RISKS, AND IS NOT TIME BASED. IT IS NOT ESTIMATED OR NEGOTIATED AND IS CREATED IN THE BUDGET DEVELOPMENT PROCESS

*BASIC TYPES OF CONTRACTS





THIS TYPE OF CONTRACT IS EMPLOYED MOST OFTEN WHEN THE SCOPE OF SERVICES TO BE PROVIDED IS **NOT WELL DEFINED**

COST PLUS CONTRACT → THE CONTRACTOR AGREES → TO FURNISH TO THE CLIENT SERVICES AND MATERIALS AT **ACTUAL COST** + AN AGREED UPON FEE FOR THESE SERVICES

COST PLUS % BURDEN & FEE

WITH US GOVERNMENT AGENCIES BURDEN ARE INCLUDED IN **INDIRECT COST**

USED FOR ENGINEERING SERVICES

THE CLIENT WILL PAY COSTS AS DEFINED **IN THE TERMS** OF CONTRACT

+
"BURDEN FEE"
↓
AT SPECIFIED PERCENT OF THE LABOR COST WHICH THE CLIENT IS **PAYING DIRECTLY**

COST PLUS FIXED FEE

THE CLIENT PAYS COSTS AS DEFINED IN **THE CONTRACT DOCUMENT**.

BURDEN ON THE REIMBURSABLE TECHNICAL LABOR COST IS **CONSIDERED** IN THIS CASE AS PART OF COST.

IN ADDITION TO THE COSTS AND BURDEN, THE CLIENT ALSO **PAYS**

↓
A **FIXED AMOUNT** AS THE **CONTRACTOR'S "FEE"**.

COST PLUS FIXED SUM

THE CLIENT WILL PAY COSTS AS DEFINED IN **THE CONTRACT DOCUMENTS**

+
A **FIXED SUM** WHICH WILL COVER "NON REIMBURSABLE" LIEU (INSTEAD) OF A COST
+ **FIXED FEES CONTRACT**


↓
WHERE THE CLIENT WISHES **"TO HAVE"**

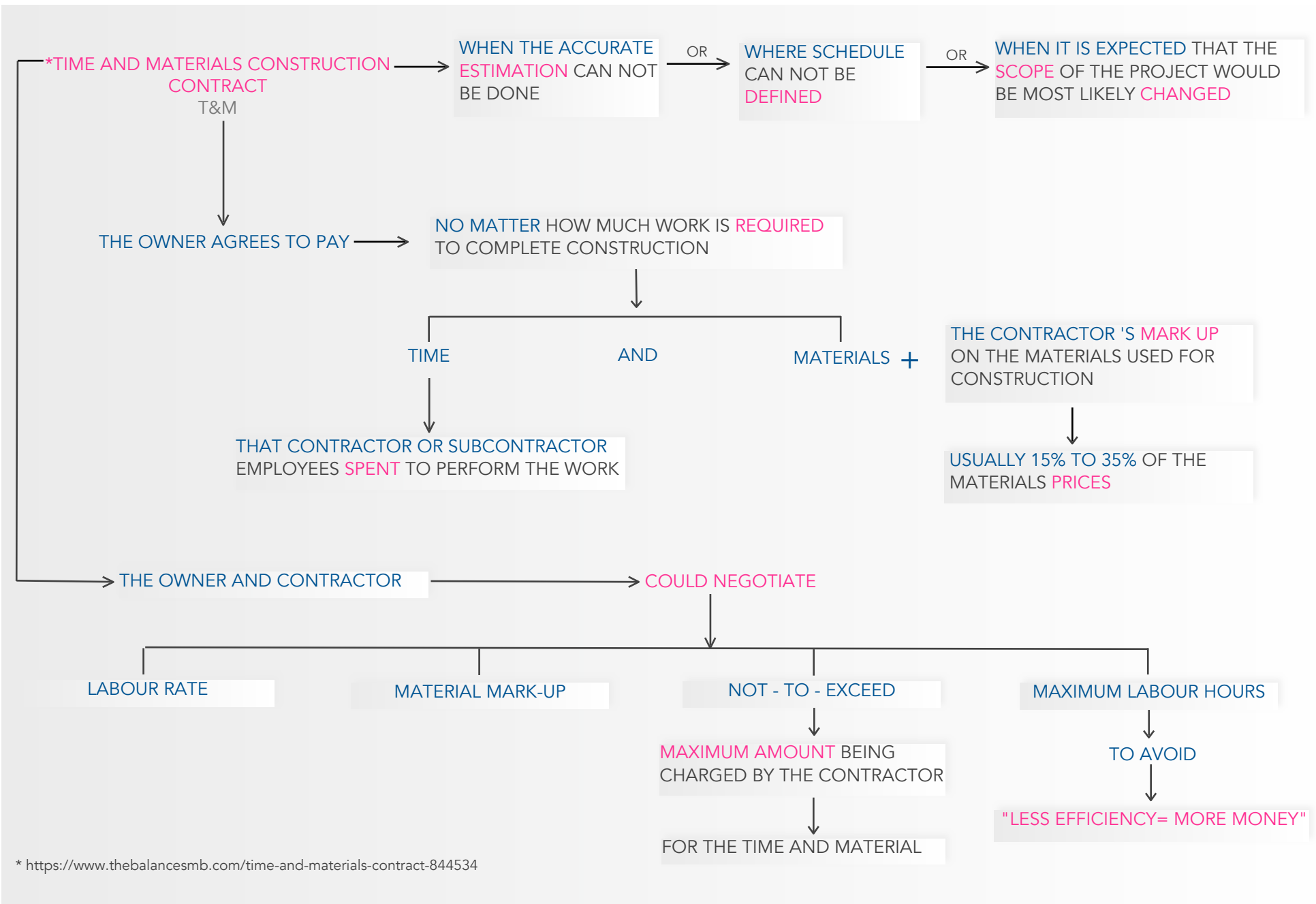
↓
THE CONTRACTOR ASSUME SOME OF THE **RISK** FOR ITEMS WHICH WOULD BE ***REIMBURSABLE** UNDER A COST PLUS FIXED FEE TYPE OF CONTRACT.

COST PLUS PERCENTAGE FEE

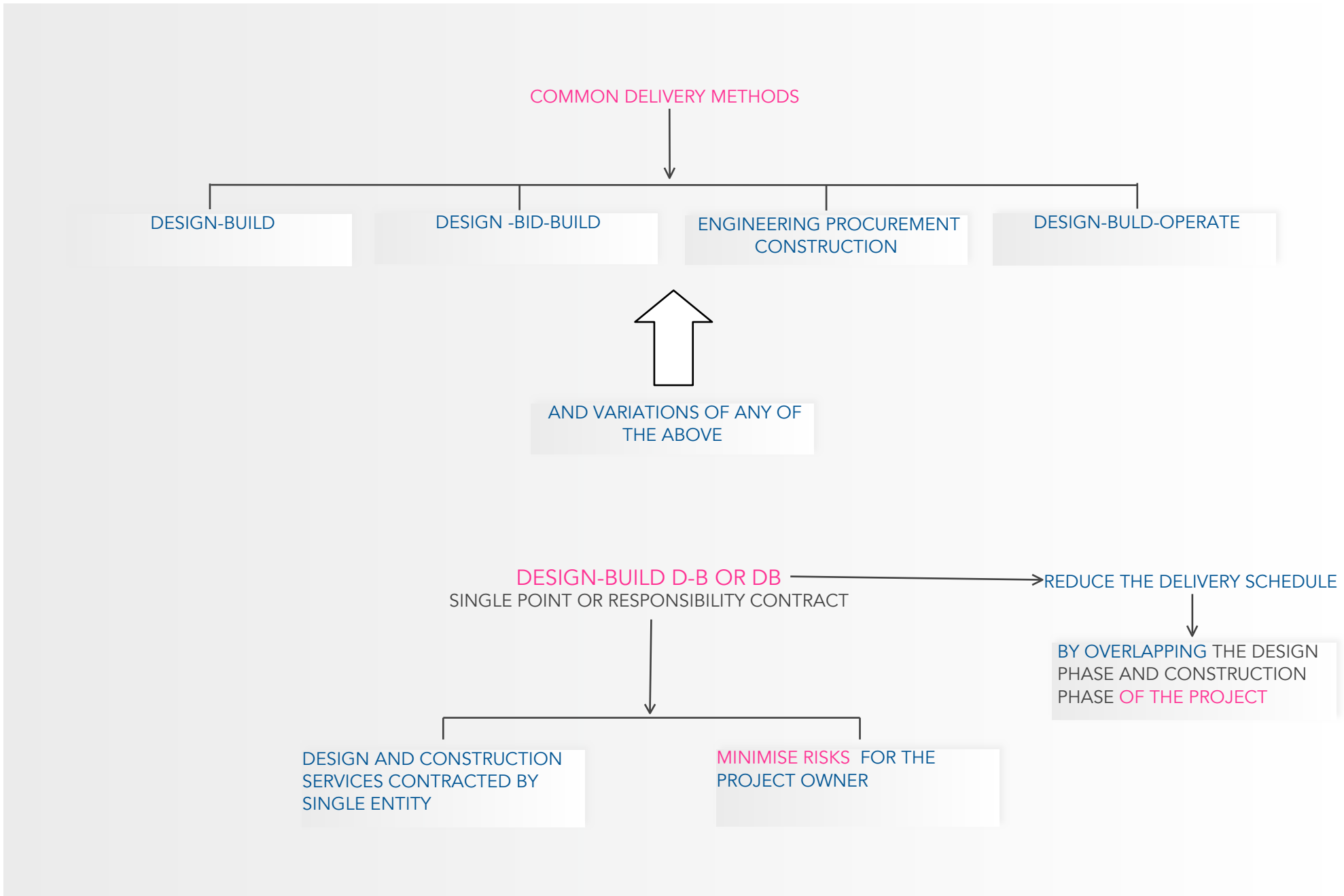
THE CLIENT PAYS ALL COSTS

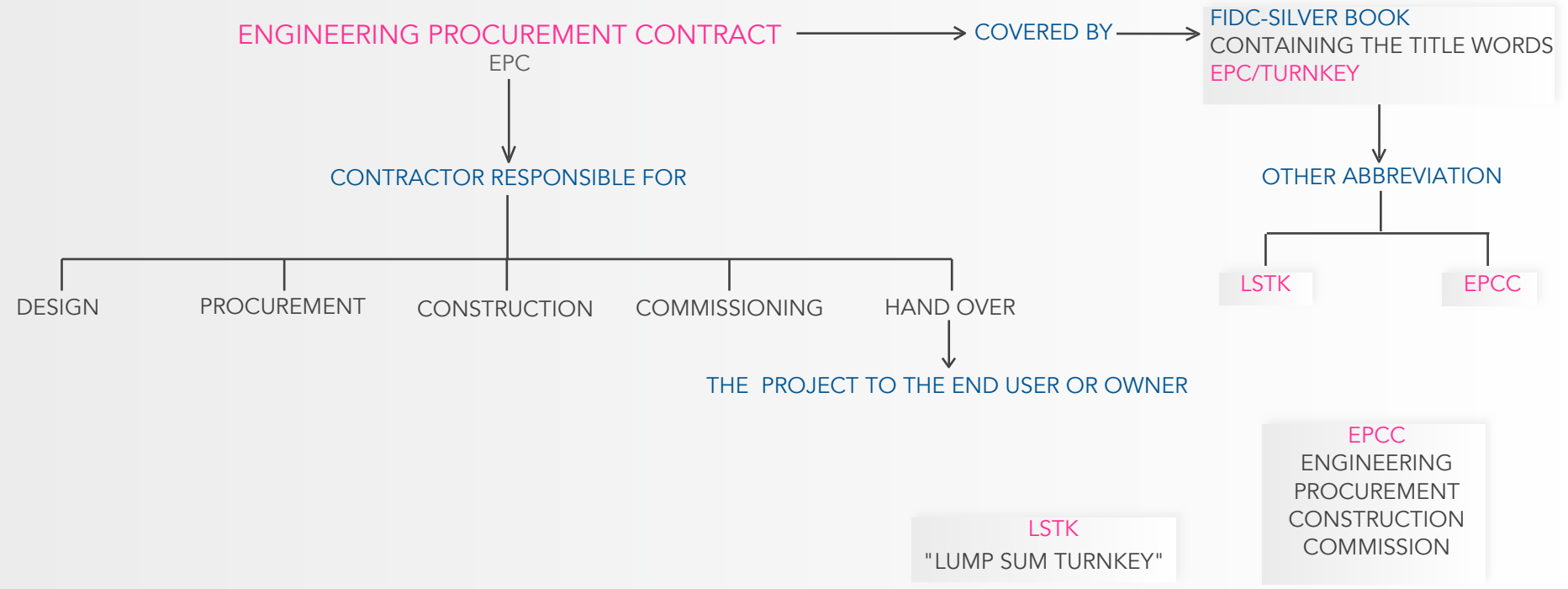
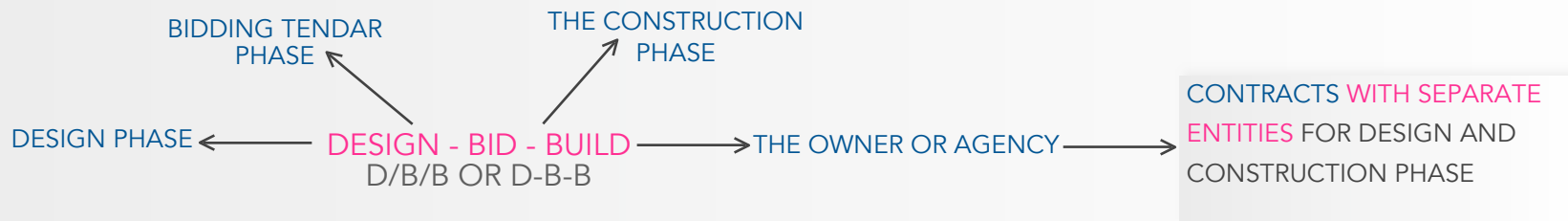
+
PERCENTAGE FOR **THE USE** OF THE CONTRACTORS' ORGANISATION

 ***REIMBURSABLE**
REPAY A PERSON WHO HAS SPENT OR LOST MONEY



* <https://www.thebalancesmb.com/time-and-materials-contract-844534>





***DESIGN - BUILD - OPERATE
DBO**

PRIVATE ENTITY

RECEIVE

CONCESSION

FROM THE PRIVATE OR PUBLIC SETOR

TO FINACE DESIGN, CONSTRUCT,
AND OPERATE FACILITY

STATED INTO CONCESSION
CONTRACT.

THE PROJECT *PROPONENT

THIS ENABLES

TO RECOVER ITS INVESTMENT, OPERATING
AND MAINTENANCE EXPENSES IN THE
PROJECT DUE TO THE LONG-TERM NATURE OF
THE ARRANGEMENTS

THE FEES ARE USUALY RAISED DURING THE
CONCESSION PERIOD.

THE RATE INCREASE IS OFTEN TIED TO A
COMBINATION OF INTERNAL AND EXTERNAL
VARIABLES

BUILD OPERATE TRANSFER (BOT)
AT THE END OF CONCESSION

THE INFRASTRUCTURE TO BE
TRANSFERRED TO THE GOVERNMENT

AUSTRALIA , NEW ZELAND AND A FEW
US STATES, CALIFORNIA, FLORIDA,
INDIANA, TEXAS AND VIRGINIA

PROPONENT
WHO ADVOCATES A
THEORY,
PROPOSAL, OR
PROJECT

*<https://en.wikipedia.org/wiki/Build-operate-transfer>

CHANGES AND CHANGE MANAGEMENT

ALTERATIONS OR VARIATIONS

SCOPE OF WORK/SCHEDULE

THE FORMAL PROCESS WHICH CHANGES OF THE PROJECT PLAN ARE

IDENTIFIED ASSESSED REVIEWED APPROVED

AND INTRODUCED

THE CHANGES MUST BE WITHIN "THE SCOPE" OF THE WORK OR IN THE ORIGINAL CONTRACT

IF NOT

THE BASIC TEST FOR THE CARDINAL CHANGE ARE

WHETHER THE TYPE OF WORK WAS WITHIN THE CONTEMPLATION OF PARTIES WHEN THEY ENTERED INTO THE CONTRACT

WHETHER THE THE JOB AS MODIFIED IS STILL SAME BASIC JOB.

FOR COMPLETING WORK ARE CARDINAL CHANGES

WORK BEYOND SCOPE SPECIFIED IN THE CONTRACT AND CONSEQUENTLY UNAUTHORISED.

THE BREACH OF CONTRACT OF SUCH MAGNITUDE, THAT IT EFFECTIVELY VOIDS THE CONTRACT. A CONTRACTOR WHO CAN PROVE ENTITLEMENT TO THIS APPROACH CAN SEEK RECOVERY FOR ITS TOTLA COST, REGARDLESS OF ANY CONTRACT LIMITATIONS.

CAN NOT BE REDRESSED WITHIN THE CONTRACT BY AN EQUITABLE ADJUSTMENT TO THE CONTRACT PRICE

OCCURS WHEN ONE PARTY AFFECTS AN ALTERNATIONS IN THE WORK SO DRASTIC

THAT IT EFFECTIVELY REQUIRES THE CONTRACTOR TO PERFORM DUTIES MATERIALLY DIFFERENT FROM THOSE ORIGINALLY BARGAINED FOR.

CARDINAL CHANGES VOIDS THE AGREEMENT, THE CONTRACTOR IS NOT OBLIGATED TO CONTINUE TO PERFORM. CAN RIGHTFULLY STOP WORK AND SEEK COMPENSATION. CARDINAL RULE

PLANNING AND SCHEDULING CONTRACT REQUIREMENTS

NOTICE TO PROCEED (NTP)

MILESTONES

PHASES

RESOURCES

COSTING

SUBSTANTIAL COMPLETION

PROJECT COMPLETION

*NOTICE TO PROCEED (NTP)

→ MAY BE IN FORM OF →

LIMITED NTP "LNTP" →

AUTHORISES ONLY LIMITED AREAS OF A PROGRAM OR PROJECT

A FORMAL NOTIFICATION

TO A CONTRACTOR OR SUPPLIER REQUESTING THE START OF THE WORK OR DEFINED PHASE OF WORK

TO BEGIN WITHIN STARTED BOUNDARIES IN ANTICIPATION OF A SUBSEQUENT NTP

0 DURATION ACTIVITY

DENOTE A PARTICULAR POINT IN TIME FOR REFERENCE OR MEASURE

*MILESTONE

USED FOR MANAGEMENT SUMMARY REPORTING

SHOULD BE CAPABLE OF VALIDATION

BY MEETING

ALL OF THE ITEMS PRESCRIBED IN A DEFINING CHECK LIST

AS AGREED WITH STAKEHOLDERS

NOT TRUE ACTIVITY

DO NOT CONSUME RESOURCES OR TIME

**PHASES

A MAJOR PERIOD OF TIME IN THE LIFE OF AN ASSET OR PROJECT

A PHASE MAY ENCOMPASS SEVERAL STAGES

***PHASED CONSTRUCTION

USED IN ORDER TO ACHIEVE BENEFICIAL USE AT AN ADVANCED DATE

IMPLIES THAT CONSTRUCTION OF A FACILITY OR SYSTEM, OR SUBSYSTEM COMMENCES BEFORE FINAL DESIGN IS COMPLETE

***RESOURCES**
ANY CONSUMABLE EXPECT THE TIME
REQUIRED TO ACCOMPLISH AN ACTIVITY

FROM

TOTAL COST AND ASSET
MANAGEMENT PERSPECTIVE

MAY INCLUDE ANY REAL OR
POTENTIAL INVESTMENT IN
STRATEGIC ASSETS INCLUDING

BECOMES A COST

WHEN IT IS INVESTED OR CONSUMED IN
AN ACTIVITY PROJECT

- TIME
- MONETARY
- HUMAN
- PHYSICAL

***RESOURCES ALLOCATION PLAN
(RAP)**

SCHEDULING OF ACTIVITIES IN NETWORK

ADJUST ACTIVITY LEVEL

WITH THE KNOWLEDGE OF CERTAIN
RESOURCE CONSTRAINTS AND
REQUIREMENTS

START AND FINISH DATES
TO CONFIRM RESOURCES
AVAILABILITY AND USE.

***RESOURCES
AGGREGATION**
SUMMATION OF THE
REQUIREMENTS FOR EACH
RESOURCE AND
FOR EACH TIME
PERIOD

****RESOURCE
LIMITED SCHEDULING**

AGGREGATION
A WHOLE FORMED BY
COMBINING SEVERAL,
TYPICALLY DISPARATE

A SCHEDULE OF ACTIVITIES
SO THAT PRE-IMPOSED
RESOURCE AVAILABILITY
LEVEL (CONSTANT OR
VARIABLES) IS NOT
EXCEEDED IN ANY GIVEN
PROJECT TIME UNIT.
SEE ALSO, RESOURCE
LEVELLING.

CODE

*RESOURCE

CALENDAR OR DATABASE

USED TO MODEL AVAILABLE RESOURCES,
USED BY PROJECT MANAGEMENT SOFTWARE
FOR RESOURCE LEVELLING ANALYSIS

TO IDENTIFY A GIVEN
RESOURCE TYPE

CONSTRAINS

LIMITATIONS ON
AVAILABLE RESOURCES

DENOTING WHEN A RESOURCE OR RESOURCE
POOL IS AVAILABLE FOR WORK ON THE PROJECT

*RESOURCES
LEVEL
A SPECIFIED QUANTITY
OF RESOURCE
UNITS
REQUIRED BY
AN ACTIVITY
PER TIME UNIT.

*RESOURCES
LEVELLING
ANY FORM OF NETWORK
ANALYSIS IN WHICH
SCHEDULING DECISION IS
DRIVEN BY RESOURCE
MANAGEMENT CONCERNS.
SEE ALSO RESOURCE
SMOOTHING

*RESOURCES
AVAILABILITY POOL
THE EXTENT TO
WHICH
RESOURCES ARE
AVAILABLE TO
MEET THE

*RESOURCES
AVAILABILITY DATE
CALENDAR DATE WHEN
RESOURCE POOL
BECOME AVAILABLE FOR
A GIVEN RESOURCE

* RESOURCE CRITICAL PATH → THE LONGEST CHAIN OF ACTIVITIES → IN THE SCHEDULE →

WHEN LIMITED RESOURCES ARE TAKEN INTO CONSIDERATION

IN ADDITION TO CPM DURATION AND LOGIC CONSIDERATIONS

CPM CRITICAL PATH METHOD

THIS MAY BE ACCOMPLISHED BY

ADDING PREFERENTIAL "SOFT" LOGIC MANUAL

OR

AUTOMATIC RESOURCE LEVELLING

OR

JUST PRACTICED ON THE FIELD PRIOR PLANNING

**RESOURCES HISTOGRAM A GRAPHIC DISPLAY → A GRAPHIC DISPLAY →

SYN. RESOURCE PLOT

OF THE AMOUNT OF RESOURCES REQUIRED AS A FUNCTION OF TIME ON GRAPH

INDIVIDUAL, SUMMARY, INCREMENTAL, AND CUMULATIVE RESOURCE CURVE LEVEL CAN BE SHOWN

***CRITICAL PATH METHOD**

CPM

→ (1) A TECHNIQUE USED

TO PREDICT PROJECT DURATION BY ANALYSING WHICH SEQUENCE OF ACTIVITIES HAS LEAST AMOUNT OF A SCHEDULING FLEXIBILITY

(2) NETWORK SCHEDULING

EARLY DATES ARE FIGURED BY FORWARD PASS USING A SPECIFIC START DATE AND

USING ACTIVITY'S DURATION AND LOGIC TIES BETWEEN ACTIVITIES TO MODEL THE PLAN TO EXECUTE THE WORK.

LATE DATES ARE FIGURED BY BACKWARD PASS STARTING FROM THE COMPLETION DATE.

SCHEDULING IS METHOD OF CHOICE FOR MANAGING PROJECTS OF

LONG DURATIONS

THE NEED TO COORDINATE FAST OR EARLY COMPLETION. OF WORK

COMPLEX TECHNICAL INTEGRATION

***RESOURCE PLANNING**

PROCESS OF

ASCERTAINING FUTURE RESOURCE REQUIREMENTS

TO DEVELOP A PLAN TO MEET THESE REQUIREMENTS

REQUIREMENTS IN MANUFACTURING

PROCES

TO CONVERT PRODUCTION PLAN AND/OR MASTER PRODUCTION SCHEDULE INTO THE IMPACT ON KEY RESOURCES

- LABOR
- MACHINE HOUR
- STORAGE
- STANDARD COST \$
- SHIPPING \$
- INVENTORY LEVELSetc

FOR SCOPE OF THE WORK/ ORGANISATION

***RESOURCE SMOOTHING**

TYPE OF LEVELLING

PROCES OF

RESCHEDULING ACTIVITIES

SUCH THAT THE REQUIREMENT FOR RESOURCES DOES NOT EXCEED RESOURCE LIMITS.

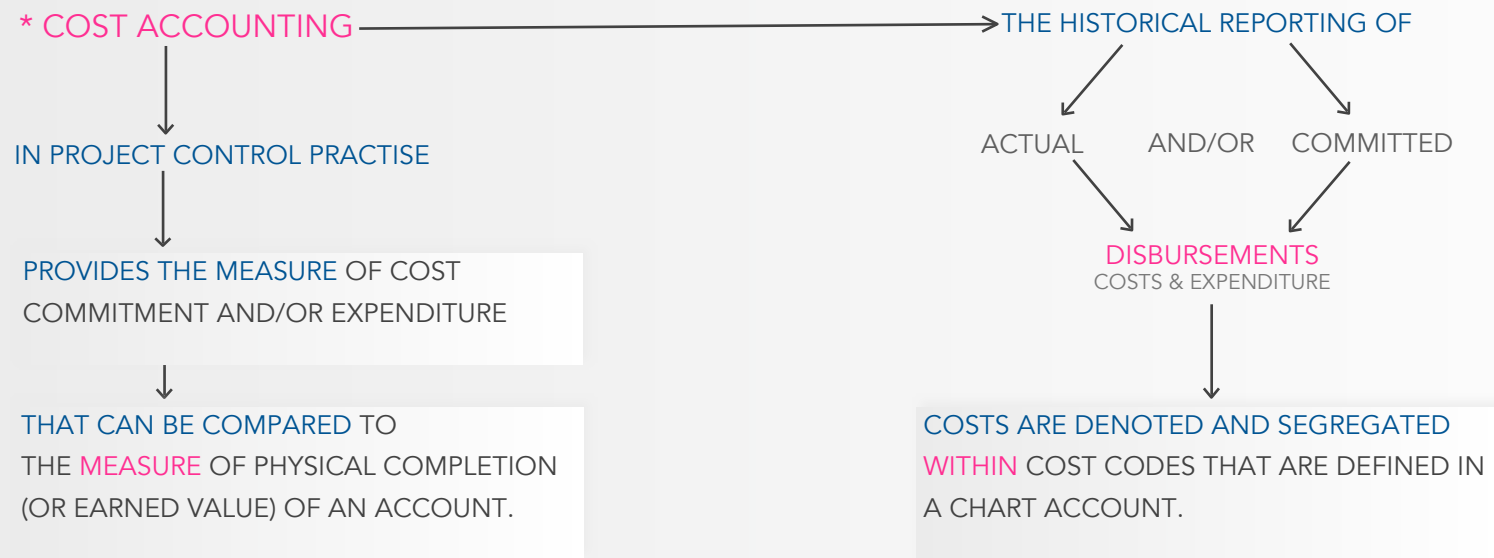
TYPE OF RESOURCE LEVELLING

EXPECT THAT THE PROJECT COMPLETION DATE MAY NOT BE DELAYED

ACTIVITIES MAY ONLY BE DELAYED WITHIN THEIR FLOAT. SEE ALSO, RESOURCE LEVELLING.

****RESOURCE THRESHOLDS**

IN RESOURCE-LIMITED SCHEDULING IT IS POSSIBLE TO SPECIFY THAT A PARTICULAR RESOURCE MAY BE EXCEEDED, IF NECESSARY, BY AN AMOUNT NOT TO EXCEED THE SPECIFIED THRESHOLD FOR THAT RESOURCE. SEE ALSO, RESOURCE LIMITED SCHEDULING.



***COST BREAKDOWN STRUCTURE**

1.) HIERARCHAL BREAKDOWN

OF A PROJECT INTO
COST ELEMENTS OR COST
CATEGORIES

SEE ALSO, COST CATEGORY; COST CENTRE

1.) HIERARCHAL STRUCTURE

THE LOWEST LEVEL, WHEN
ASIGNED RESPONSIBILITY,
TYPICALLY **DEFINES**

THE SMALLEST UNIT OF
ACTIVITY, **A COST CENTRE**

AREA OF RESPONSIBILITY
AGAINST WHICH COSTS ARE
ACCUMULATED

DIVIDES BUDGETED RESOURCES
INTO ELEMENTS **OF COSTS**

- LABOR
- MATERIALS AND
- OTHER DIRECT COST

DEFINED SECTIONS IN
THE CORPORATE SYSTEM
REPRESENTING UNITS OF
RESPONSIBILITY AS WELL AS
ACCOUNTING UNITS

***COST BASELINE**

TIME-PHASED BUDGET USED TO
MEASURE AND MONITOR COST
PERFORMANCE.
DEVELOPED BY SUMMING
ESTIMATED COSTS AND IS
USUALLY DISPLAYED IN THE
FORM OF AN **S** - CURVE.

***COST CONTROL**

THE APPLICATION OF PROCEDURES

TO MONITOR EXPENDITURES AND PERFORMANCE **AGAINST** PROGRESS OF PROJECTS OR MANUFACTURING OPERATIONS

SYSTEM

TYPICALLY PERFORMED AT **DESIGNATED** LEVELS IN

OF MANAGING COSTS WITHIN **THE BOUNDS** OF THE BUDGETS OR STANDARDS

THE WORK BREAKDOWN STRUCTURE

TO MEASURE VARIANCE FROM AUTHORISED BUDGETS AND **ALLOW** EFFECTIVE ACTION TO BE TAKEN TO ACHIEVE MINIMUM COSTS.

BASED UPON WORK ACTUALLY PERFORMED

A HISTORICAL OR PREDICTIVE METHOD

ASCERTAINING

FOR WHAT PURPOSE

EXPENDITURES ON THE PROJECT WERE **MADE**

AND

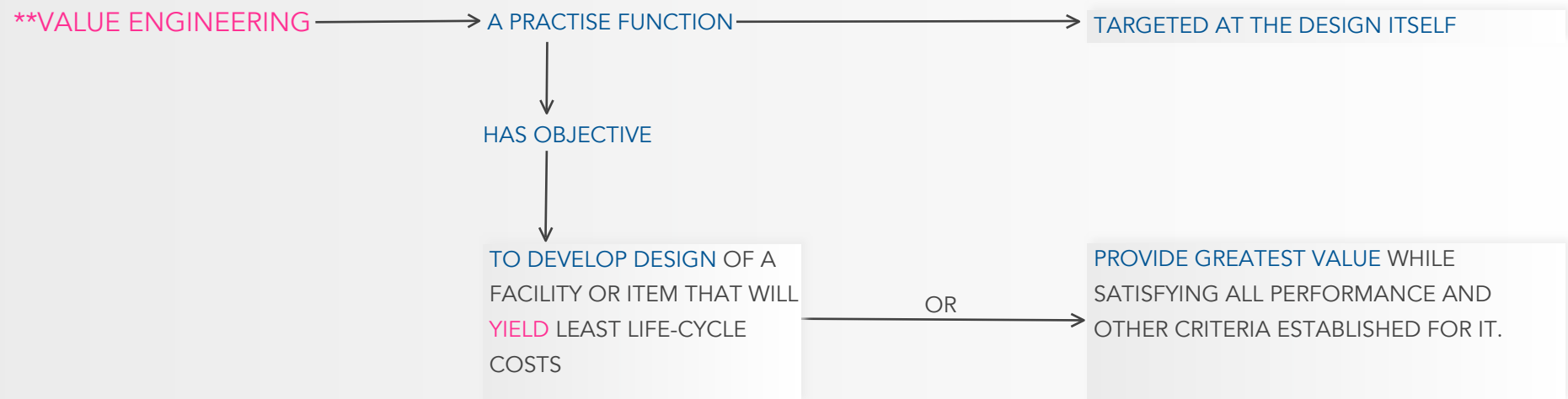
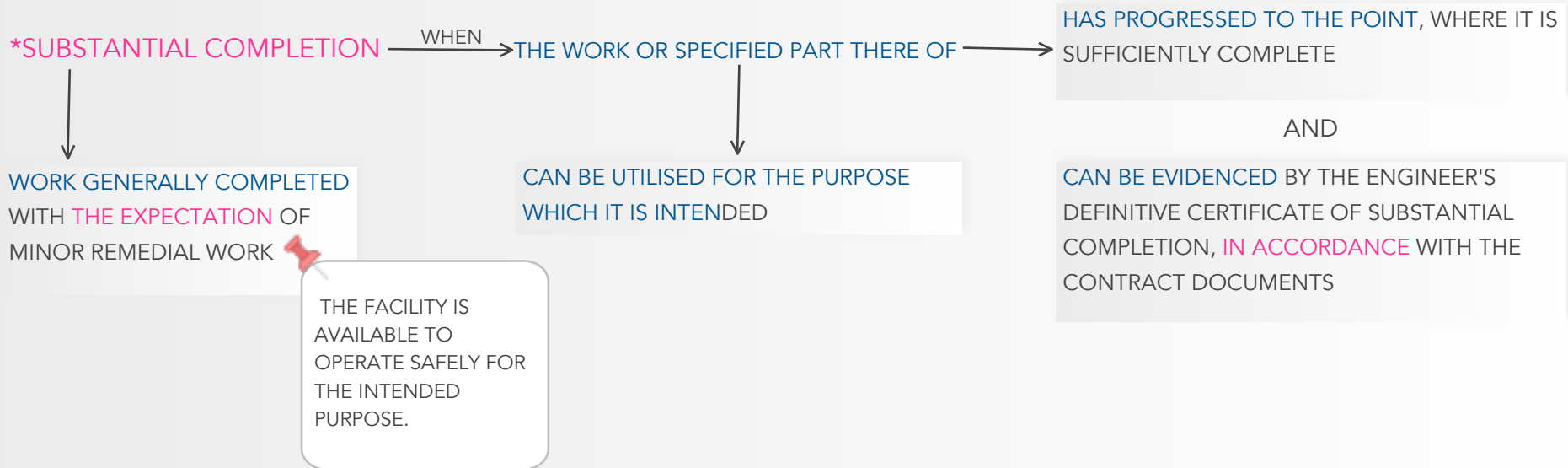
UTILISING THIS INFORMATION

TO PROJECT, THE COST OF A PROJECT AS WELL AS COSTS OF FUTURE PROJECTS.

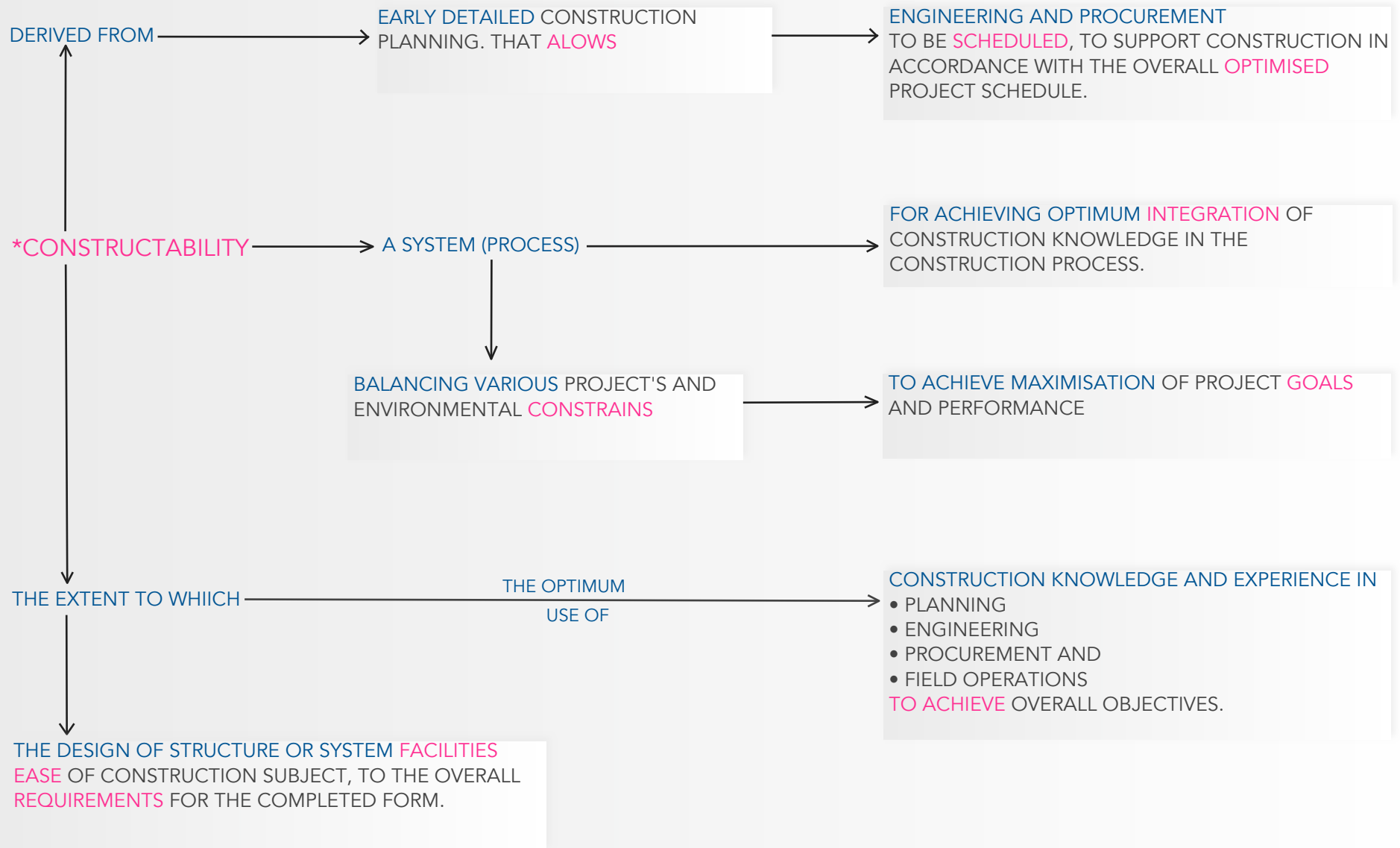
***COST ANALYSIS**

MAY INCLUDE

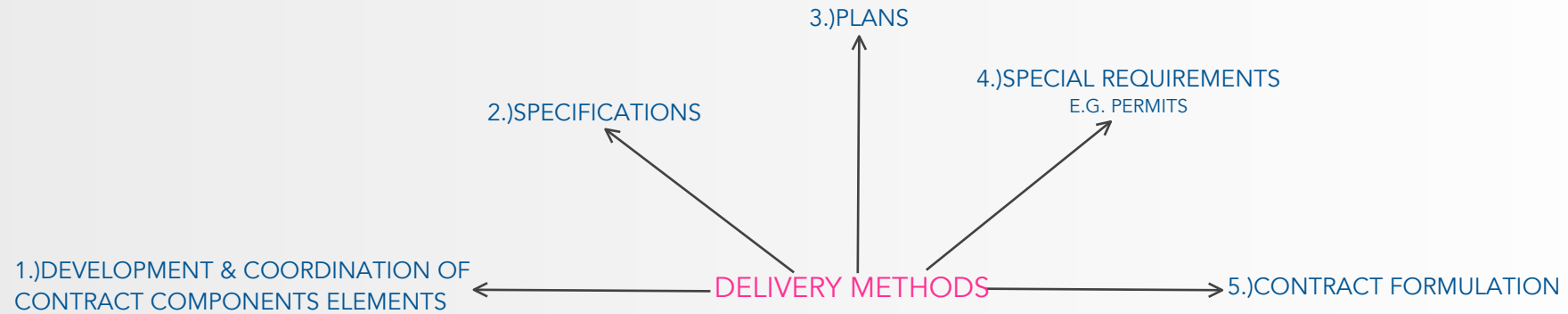
- APPLICATION OF ESCALATION
- COST DIFFERENTIALS BETWEEN
 - VARIOUS LOCALITIES
 - TYPES OF VARIOUS BUILDING
 - TYPES OF PROJECTS
 - TIME OF YEAR



Aa *Pg110; **Pg118

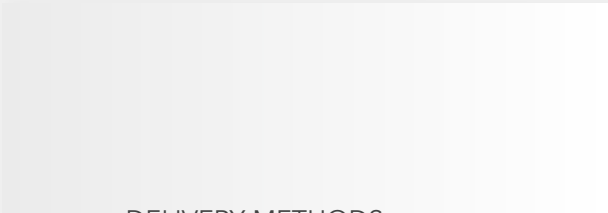


KEY POINTS TO REVIEW



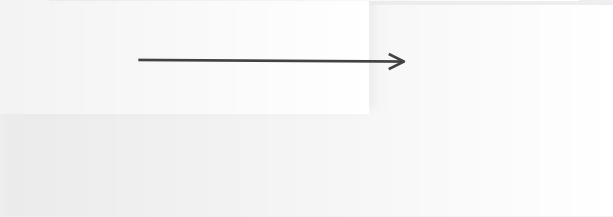
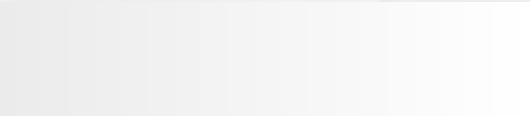
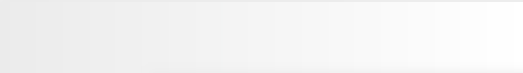
***CONTRACT TYPES**
DESCRIBES THE FINANCIAL TERM OF RELATIONSHIP BETWEEN AN OWNER AND A CONTRACTOR, WHILE THE **DELIVERY METHODS** DESCRIBES THE METHOD OF MANAGEMENT THE CONTRACTOR WILL USE TO PERFORM THE WORK.

*** MILESTONES ARE**
INTERIM COMPLETION DATES THAT ARE EITHER CONTRACT DRIVEN OR CONTRACT SELF-IMPOSED TO MEASURE THE PROGRESS OR TRIGGER SUBSEQUENT WORK ACTIVITIES. THEIR ACHIEVEMENT MAY EARN PROGRESS PAYMENT FOR THE CONTRACTOR.



DELIVERY METHODS

IMPORTANT PARTICIPANTS IN ANY







ABBREVIATIONS LIST

PSP - PLANNING AND SCHEDULING PROFESSIONAL