2

APPROACH
&
METHODOLOGY
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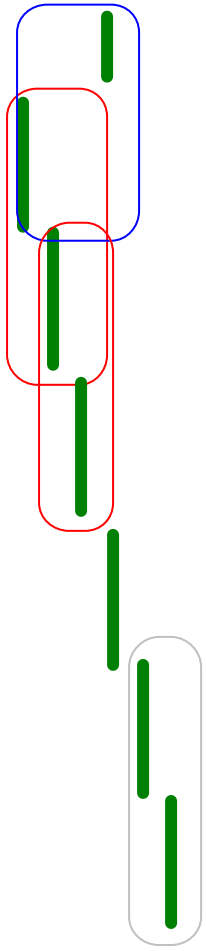
02 - Phasing
03 - Explanation of the approach
04 - Example of phase 1 approach
07 - Phase 1 scanning
08 - Plan
09 - Plan / Data
11 - Methods
12 - Logistics

PROJECT APPROACH: PHASING

Grouping of phases according to need

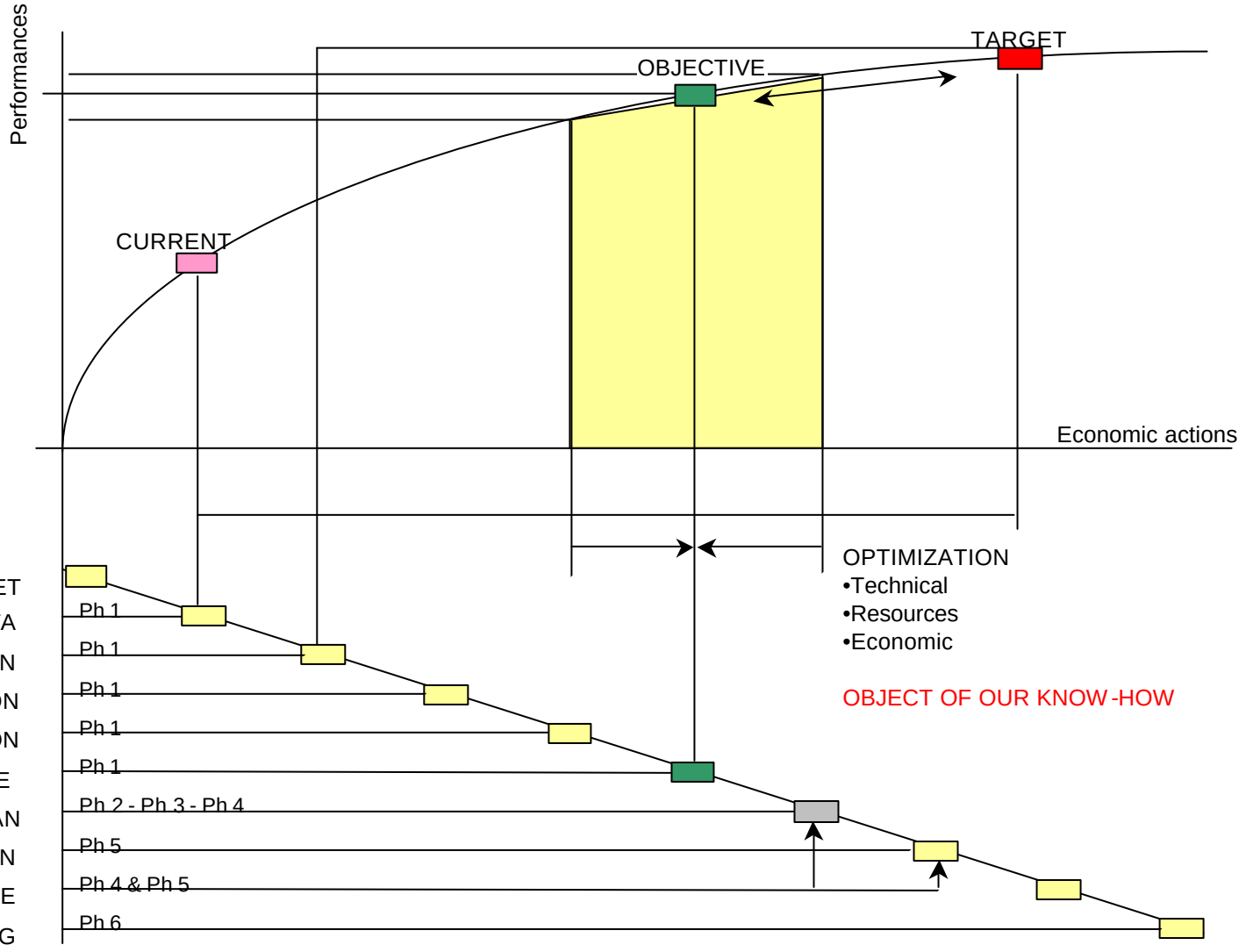


THE PHASING OF AN INDUSTRIAL PROJECT (*)

PHASE 0	**COMPANY OBJECTIVE INDUSTRIAL APPROACH** **Feasibility** **Internal or external**		R & D Master plan or strategy Plants - Lines - Units Equipment Reorganization
PHASE 1	**PRE-ENGINEERING**	Data + Objectives = Analysis Simulations Development Financial estimates Call for tender TS	**GPD** (General preliminary design)
PHASE 2	**PROPOSAL**	Supplier documentation Detailed development Editing of supplier documentation Outside order TS Internal specifications	**DPD** (Detailed preliminary design)
PHASE 3	**PRODUCTION DOCUMENTATION**	Incorporating of the site's constraints Defining of the procedure's inferred tasks. Inferred organization Updating of anticipated layout Internal specifications	**PP** (Detailed preliminary design)
PHASE 4	**PRODUCTION**	Supplier follow-up S/C engineering follow-up S/C production follow-up Supplier acceptance tests	Procedure coherence Solution coherence Master plan coherence
PHASE 5	**IMPLEMENTATION**	Physical system Assembly Tests Acceptance	Procedure coherence Solution coherence Product coherence
PHASE 6	**OPERATING**	Physical system Human resources Operating plan Procedures JIT- work-in-process Quality plan …	Training & Optimization

** : This breakdown is normative and excludes any assumptions about needs.*

PROJECT APPROACH: THE TARGET



PROJECT SEQUENCE

ESTABLISHING OF THE TARGET
INVENTORY / DATA
ANALYSIS & SIMULATION
INTERPRETATION
DIAGNOSIS or VISION
COHERENCE / OBJECTIVE
ACTION PLAN
IMPLEMENTATION
FOLLOW-UP & COHERENCE
OPERATING

PROJECT APPROACH: PHASING

THE METHODOLOGIES APPLIED TO THE PHASES ARE DEVELOPMENTS SPECIFIC TO EACH PROJECT.

THE DESCRIPTION OF THESE PHASES REQUIRES A PRESENTATION THAT IS ADAPTED TO THE FIELD OF APPLICATION, THE COMPANY'S ORGANIZATION AND THE PLANT CONTACT PEOPLE:

- GENERAL MANAGEMENT
- HUMAN RESOURCE DEPARTMENT
- SALES DEPARTMENT
- INDUSTRIAL DEPARTMENT
- ENGINEERING DEPARTMENT
- PRODUCTION (or Sector Production) DEPARTMENT
- DEVELOPMENT - METHODS - INDUSTRIAL ENGINEERING - R & D DEPARTMENT
- INTERNAL LOGISTICS (Infrastructures & resources)
- PURCHASING DEPARTMENT
- QUALITY DEPARTMENT
- MAINTENANCE DEPARTMENT
- TRAINING DEPARTMENT
- .....

SEE THE DOCUMENTATION GIVING PRESENTATION EXAMPLES.

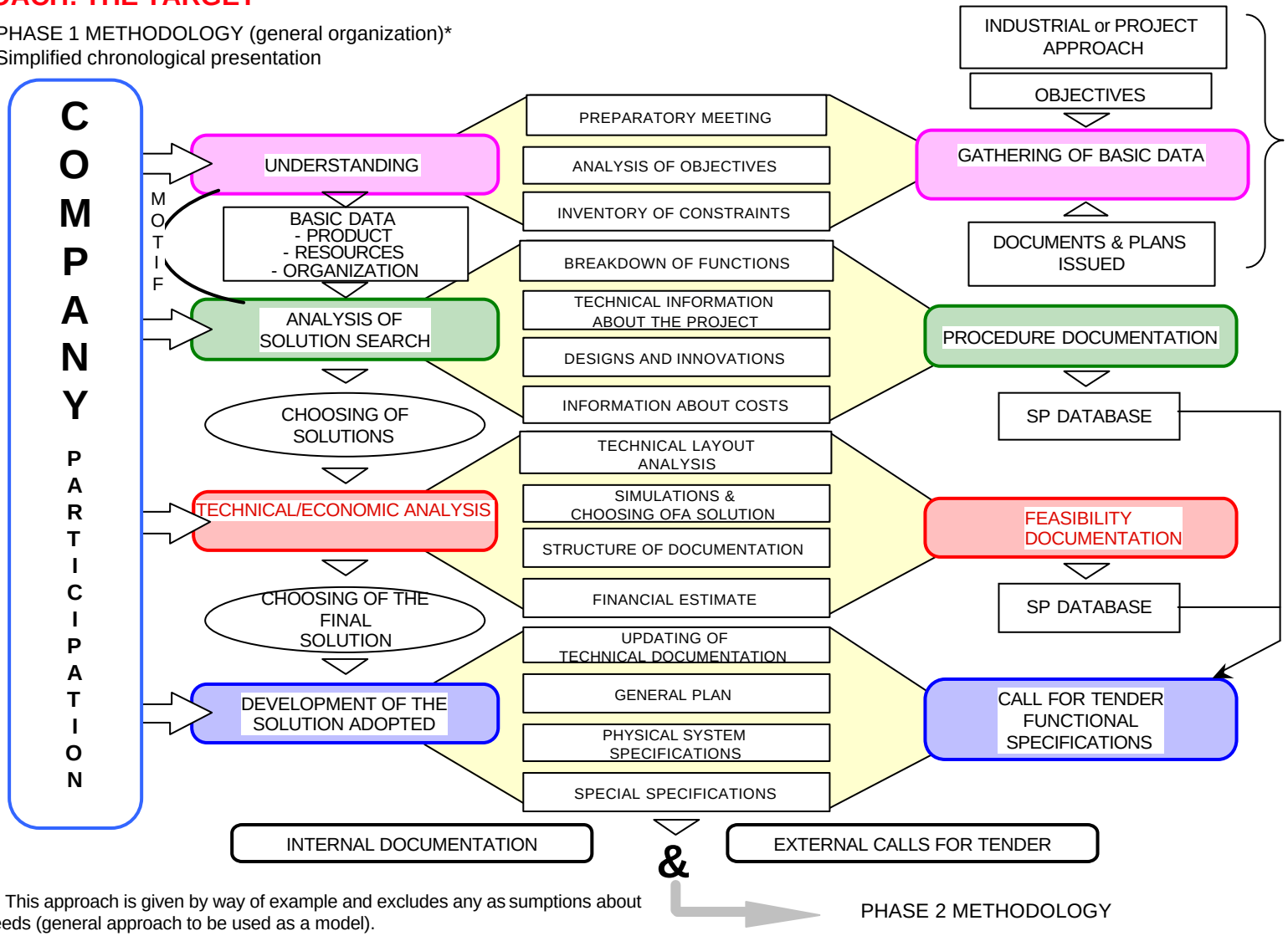
A SPECIFIC PRESENTATION MAY BE CREATED DEPENDING ON THE PROJECTS' OBJECTIVES AND DEGREE OF URGENCY.

THE FOLLOWING ILLUSTRATES THE DESIGN APPROACH (PHASE 1 EXAMPLE)
This approach is given by way of example and excludes any assumptions about needs.
The following 3 pages present the analysis and design method for phase 1 (preliminary design)

- ANTICIPATED SEQUENCE OF THE PRELIMINARY DESIGN PHASE. Translation into
- DATABASE ORGANIZATION MATRIX (A) - PRELIMINARY DESIGN PHASE
- FUNCTIONAL MATRIX (B) OF A PHYSICAL SYSTEM - PRELIMINARY DESIGN PHASE
- INTER-MATRIX SCANNING FOR THE ANALYSIS PHASE. DESIGN PHASE DATABASE

PROJECT APPROACH: THE TARGET

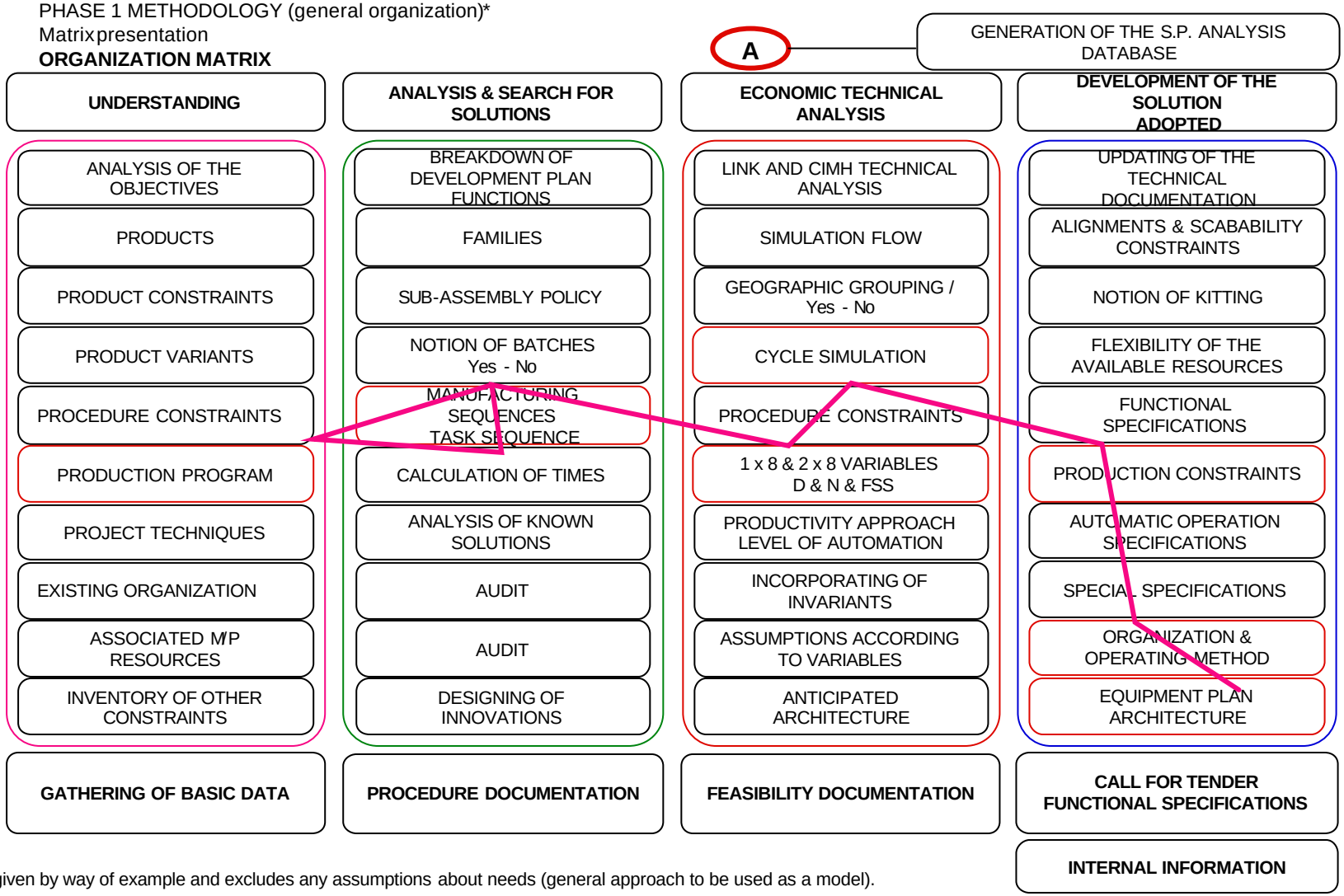
PHASE 1 METHODOLOGY (general organization)*
Simplified chronological presentation



(*) This approach is given by way of example and excludes any as sumptions about needs (general approach to be used as a model).

PROJECT APPROACH: PHASING

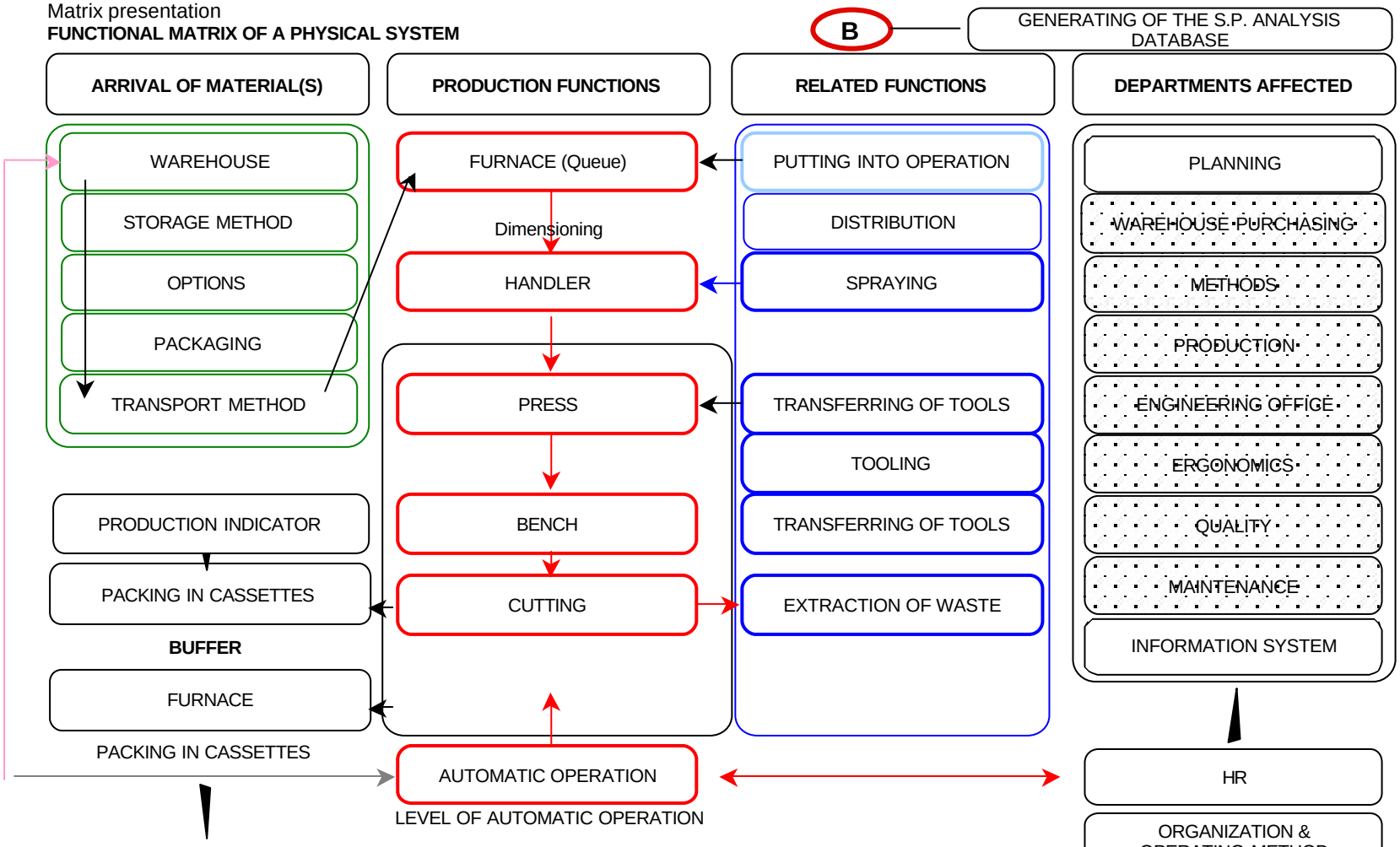
PHASE 1 METHODOLOGY (general organization)*
Matrix presentation
ORGANIZATION MATRIX



(*) This approach is given by way of example and excludes any assumptions about needs (general approach to be used as a model).

PROJECT APPROACH: PHASING

PHASE 1 METHODOLOGY (general organization)*
Matrix presentation
FUNCTIONAL MATRIX OF A PHYSICAL SYSTEM



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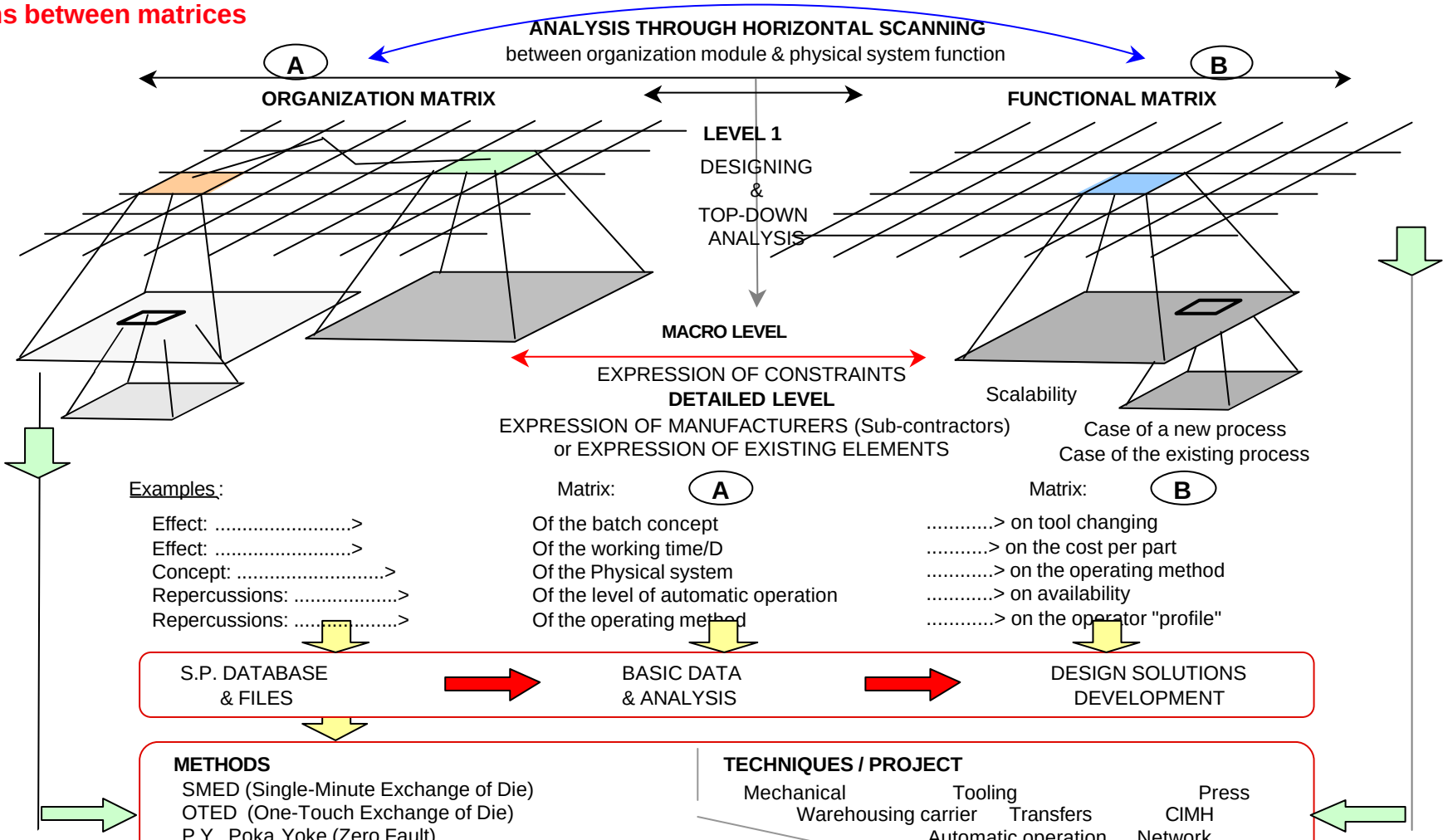
EXAMPLES OF PROJECTS
ARCHITECTURES

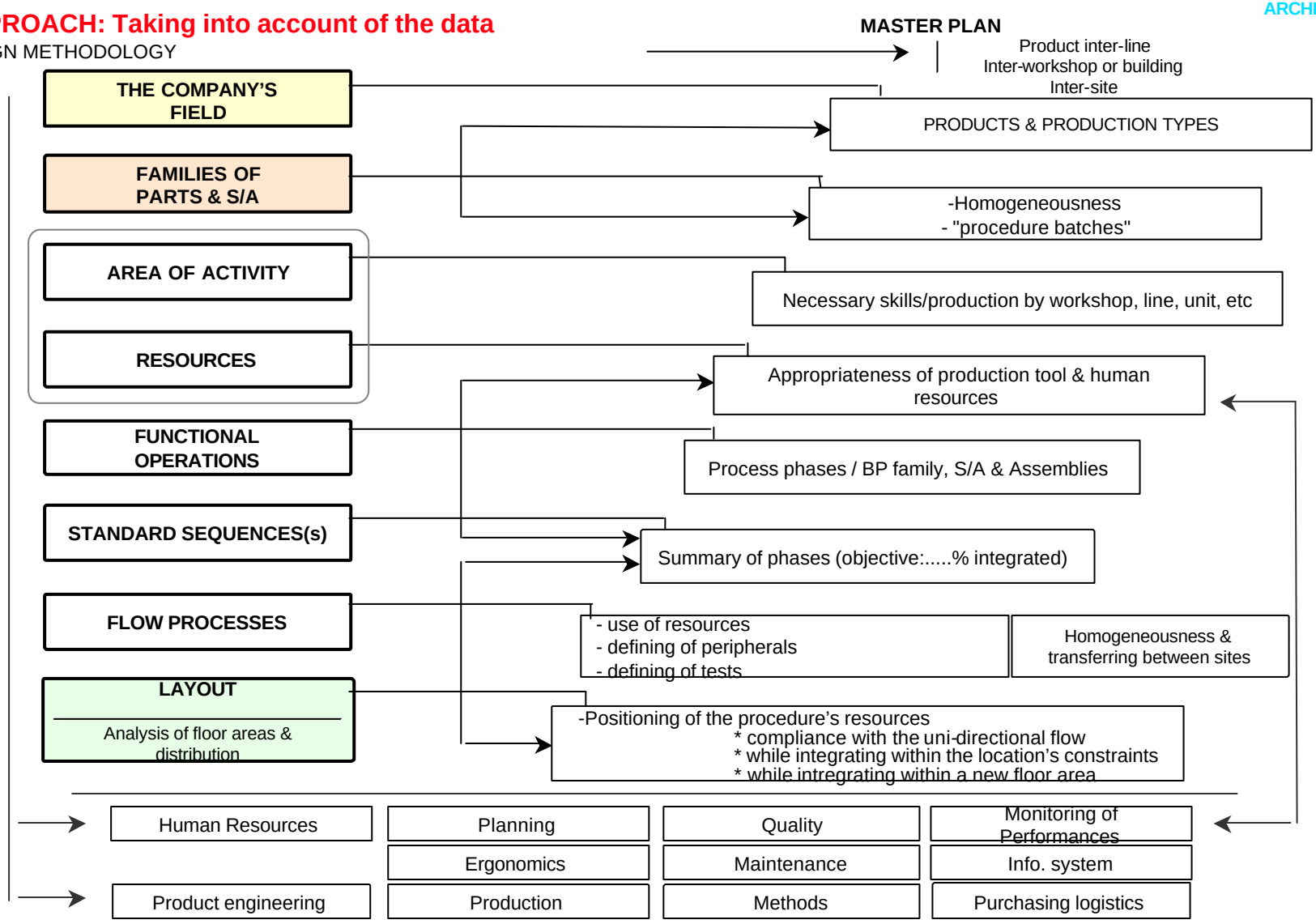
PHASE 1 METHODOLOGY (general organization) *

Relations between matrices



PROJECT APPROACH: Taking into account of the data

ANALYSIS & DESIGN METHODOLOGY



EXAMPLES OF PROJECTS
ARCHITECTURES

PROJECT APPROACH: ANALYSIS & DESIGN METHODOLOGY

Taking into account of the data →

Product inter-line
Inter-workshop or building
Inter-site

INVENTORY or ANALYSIS & DESIGN

Products: THE COMPANY'S FIELD - Products and types
- Basic parts
- Sub-assemblies
- Finished products and the constraints specific to them

→ INDUSTRIAL APPROACH or POSITIONING or REPOSITIONING of the COMPANY or COMPANIES

Such as:
- dimensions - quality, handiness
- capability
- origin
- variables
- Other constraints

→ APPROPRIATENESS OF RESOURCES TO PRODUCTS

Operating sequences
- assembly
- control
- testing
- trying out

→ SUMMARY OF PHASES OBJECTIVE ----% INTEGRATED

Areas of activity. Necessary skills by workshop, line, unit, etc →

Resources
- invariant
- new
- withdrawn
- originating from other sites

→ APPROPRIATENESS OF PRODUCTION TOOLS & HUMAN RESOURCES

Flows
- incoming
- current
- outgoing
- buffers
- provisioning of preparation stations, chain, etc
- roller cabinets or kit from the warehouses
- partner and sub-contractor origins, shipping to partners and sub-contractors.

→ APPROPRIATE INTER-UNIT INTER-WORKSHOP INTER-SITE CIMH

Functional operations
- Basic parts
- Sub-assemblies
- Assembly.

→ PROCESS PHASES BY FAMILY

PROJECT APPROACH: ANALYSIS & DESIGN METHODOLOGY

Taking into account of the data

INVENTORY or ANALYSIS & DESIGN

Transferring of products
- type
- location
- frequency

The control system's needs
- internal to a unit
- external connection to the unit
- inter-unit connection

Stations and equipment
- anticipated technique
- value analysis
- innovative techniques
- level of automatic operation
- decision-making matrices

Handling equipment
- static equipment
- dynamic equipment

Staff
- qualification
- quality
- multi-facetedness
- working hours
- training
- payment system

The analysis also covers the inter-unit interfaces
- loading
- unloading
- preparation stations
- sub-assembly and kit allocating area
- anticipated structure of stacking stillages
- capability
- mechanization
- indexing
- pallettization
- checking of position

Harmonization & Standardization

Buildings: organizational aspect according to the variant assumptions:
- inventory, basic floor areas, free floor areas, scalable floor areas
- reuse, rehabilitation, building.....

EXAMPLES OF PROJECTS ARCHITECTURES

Product inter-line
Inter-workshop or building
Inter-site

NOTION OF KITTING

PRODUCTION MANAGEMENT INDICATORS & ASSOCIATED MANAGEMENT

COMPLIANCE WITH THE UNI-DIRECTIONAL FLOW

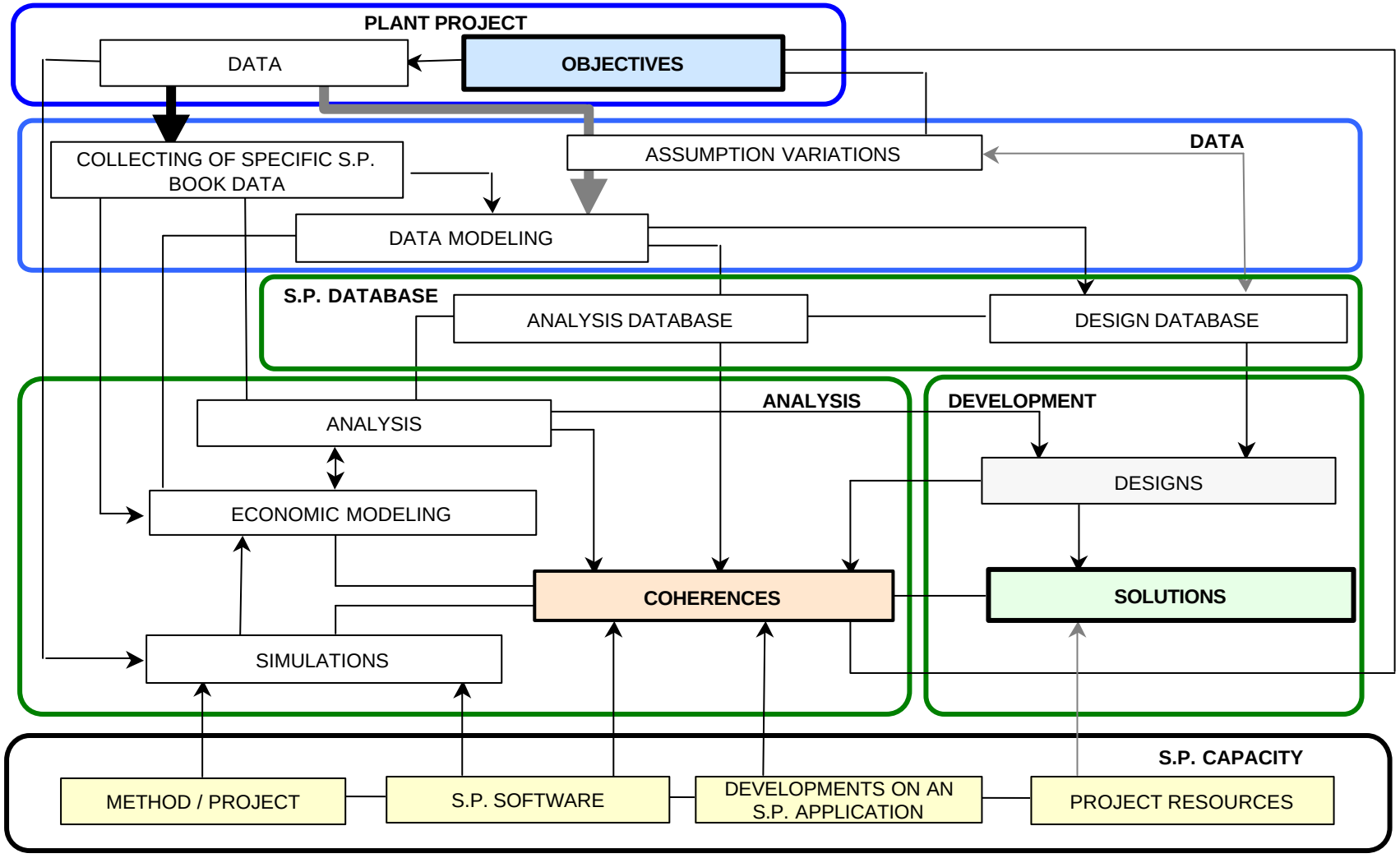
APPROPRIATE HANDLING
Assurance of fluidity

APPROPRIATENESS OF THE PRODUCTION TOOLS & HUMAN RESOURCES
STAFF AUDIT
MOTIVATION

ON SITE & INTER-SITE LOGISTICS

USEFUL PRODUCTION FLOOR AREAS& HR
While integrating within the locations' constraints
--
While integrating within a new floor area

Document to be explained during our visit.
Dealing with a project requires an applied and specific approach according to need.



PROJECT LOGISTICS

In the interests of close cooperation with the companies' staff, the S.P. team collects data and performs research on site.
The company SECTEUR PRODUCTIQUE provides, for the project concerned:

-human resources -computer equipment -appropriate software and simulators -specialized documentation -applied and personalized methods.	Depending on the project.

STANDARD SERVICE CONFIGURATION