CEISAR Glossary

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Action

CEISAR defines 4 levels of Actions:

- End to End Process
- Organized Process
- Activity
- Function

Action Model

Describes instructions given to Organization Actors so that they correctly execute Actions.
For Workers, instructions are documentation (procedures, user guide).
For Computers, instructions are software.

Activity

Functions of an Organized Process executed by the same Organization Actor at the same time.
A **Manual Activity** (example: checking a signature) is assigned to a Worker.
An **Automated Activity** (example: producing Payroll statements) is assigned to an Automate.
An **Assisted Activity** (example: any transaction done on a keyboard) is assigned to an Assisted Worker.
workflow engine may assign Activities.

Actor

Business Actor or Organization Actor.
The same Person can be both Business Actor and Organization Actor. Example: a Customer executing Actions on Internet.
Organization Actors are Operation Actors (as Salesman) or Transformation Actors (as Project manager).

Actor Model

For Workers, defines: Roles, Duties, Rights, and Competencies.
For Computers, defines: Roles and Configurations (infrastructure, hard and soft).

Application

Software part of a Solution Model.

Architecture

- “Enterprise Architecture” has a specific meaning (see below).
- When we use the word “Architecture” alone it means what allows or helps Sharing or Reuse: by extension, also includes what is Shared or Reused.
- To avoid confusion, we prefer to use “Global Model” rather than Architecture to identify the different Maps which help understand EA

Architecture is used with many different meanings:

- For “data Architecture”: see Data Model
- For “infrastructure Architecture” (Computer Configurations, Hardware Architecture, Middleware Architecture, network Architecture, Platform Architecture, Portal Architecture, System Architecture, Transactional Architecture, Web Architecture): see Actor Model
- For “integration Architecture”: see Transformation Model
- For “logical Architecture”: see Operation Model
- For Maps (such as Block Cartography): see Global Model
- For Reusable Component Architecture, SOA Architecture or Service Architecture: see Reused Model
- For Organization Architecture: see Actor Model
- For software Architecture: see Operation Model and Transformation Model
- System Architecture: see Operation Architecture
- Approach and Tools: see Transformation Model

Assisted Worker (or IT User)

Association of a Person and a work station executing Actions who has certain Rights and Duties grouped into a Profile.
Most Employees are Assisted Workers.

Customers, providers, partners (including Outsourcing), etc. can also be Assisted Workers.

Attribute

Information element in an Entity.
Each Attribute is characterized by a Type.

Automate

Computer which executes Actions.

Basic Functions

Functions may Reuse Functions. The lower level of Function is called Basic Function.

Black Component

Component reused at Execution time through an Interface, and thanks to middleware if not executed in the same IT Computer.
Example: Software Service "Am I authorized to do it?"

Block (=Package)

A Solution software can be big: it is broken down into a hierarchy of Blocks which interface with other Blocks to share Software Services or Data Services.
For some IT Systems, it is possible to classify each Block level such as Area, Zone, ...

Block Cartography

Representation of the hierarchy of Blocks and of their exchanges to understand the software Model.
It helps to reuse black Components thanks to clean interfaces. It also helps to localize and simplify evolutions: modification or replacement of Blocks

Business Actor

Person or Legal Entity involved in an End to End Process: Customer, prospect, partner, provider, Government Entity. Each Business Actor owns a Business Actor Role such as Customer, Partner…

Business Entity

Entity necessary for Business, independently of the Organization of the Enterprise, such as Product or Customer, Contract or Account.

Business Function

Function of an End to End Process.
Example: check data entry, compute price, send message to Customer.
Not to be confused with Organization Functions.

Business Transaction

A set of Functions that are executed all together. The set of Functions is completely executed, suspended as a whole, or abandoned completely, thus ensuring a consistent state before and after it is applied.
Example: To transfer money from one Account to another, a debit is applied to the first and a credit to the second. To ensure that the two Accounts are updated together, the Functions debit and credit are applied in the same Business Transaction.

Class

Describes the Structure shared by a list of Instances. It contains Attributes, Functions (or Methods) and User Interfaces. The definition of the Attributes and Methods serves as the Interface to the Class.
Example: for Class “Person”, Attributes are: "Name", "First Name", "Birth Date" and Methods are "search Person by name", "compute age".
Values for Instance 1: "Smith", "John", "03 10 1976"
Values for Instance 2: "Murray", "Paul", "06 03 2002"
A Class "benefits" from the Attributes and Methods of the Classes from which it inherits.
Example: Life Insurance Policy inherits from Insurance Policy which is a basic model for all Insurance Policies (damage, life, health...)
The same Business Entity can be implemented in one or several Classes. Example:
The Business Entity "Address" could be described by one Class "Address".
The Business Entity "Bill" could be described by a Class "Bill Header" and a class "Bill Line".

Client
Actor who benefits from the Process Value: he can be a Business Actor (Customer, prospect, partner, provider, government entity), or an Organization Actor such as an employee.

Company
A Group is broken down into Companies. The breakdown criteria can be: Product Line or Processes (like Distribution/Production) or Customer segment or Geography.

Competency
Actions that a Worker is able to execute.

Component
CEISAR reserves the word “Component” for software Model elements: Solution software, Process software, Activity software or Function software. A component can be reusable or not.

Computer
Work station (for Assisted Worker) or Server (for Automate) which executes Actions.

Contract
Agreement signed when a Legal Entity sells a Product to a Subscriber.
Generally the Subscriber is a Customer.
For Distribution Agreement (including commissioning), the Subscriber is the Distributor.
For provider Agreement, the Subscriber is the Procurement department.

Customer
Person or Legal Entity who benefits from Enterprise Value. For many Enterprises he or she can be a Subscriber of a Contract (for Legal purposes) and/or a Decider (for Sales purposes)

Data Model
Defines each Entity.
Describes how the Entities are identified, versioned, related to each other and detailed with Attributes.

Data Service
Software Service which gives access to data.
Accessing data through Data Services means that data structure may evolve independently from software

Delivered Service
Service delivered to a beneficiary.

Descriptor
A Descriptor (such as Person or Organization Unit) is an Entity which has the simplest life-cycle: created, modified as many times as necessary and deleted. A Descriptor is not Applied as an Operation; a Descriptor is generally modified by Application of an Operation.

Descriptor Right
Describes authorized Actions for Descriptors (create, modify, delete, consult).
Authorized Actions are grouped into Functional Domain.

Domain
Hierarchic structure which allows to group Entities like:
- Activity Domains: helps define list of Activities by Role
- Function Domains: used to limit the number of Rights and Duties defined for each Profile
- Process Domains
- Business Entity Domain

Duty
Actions that the Organization Actor should do. They requires adapted Competencies.
Useful in automatic assignment of Activities to Organization Actors
Like Rights, Duties are managed in Profiles.

End to end Process

Chain of Business Functions triggered by an independent Event delivering Process Value to a Client Process.
Example: “execute a Customer order”. The Independent Client Event is the Customer's request.
Example: “hire an employee”. The Independent Client Event is the Manager’s request.
End to End Processes are Operation Processes or Transformation Processes.
A Business Process is broken down into 2 parts:

- the End to End Process **Invariants** which define the Functions of the Business Process which are the same for all competitors.
- the Business Process **Specificities** which define what has been added by the Enterprise to customize the Business Process Invariants and gain a competitive advantage.

End to End Process Client (or Business Process)

Business Actor who obtains Value from End to End Process.
For Primary Processes it is the Enterprise Customer.
For Resources Processes (such as human resources, or Enterprise reporting), the Business Process Client is generally an Employee.

End to End Process Invariant and Specificity

Invariant Functions of the End to End Process are the same for all competitors on the market.

Specific Functions of the End to End Process are added to obtain a competitive advantage. It often includes flows towards the Business Process Client.

Enterprise

An Enterprise is an agent which creates "value" for a Customer. The value can be economic or not (for example, cultural value).
An Enterprise can be a Legal Entity, a part of a Legal Entity, a network of Legal Entities.
A Group of Companies may represent a real Economic Entity with a unique decision center, without being described as one big Legal Entity. The Group teams represent an Enterprise, and each Company represents an Enterprise.
An Enterprise is described according to a cube of 3 dimensions:

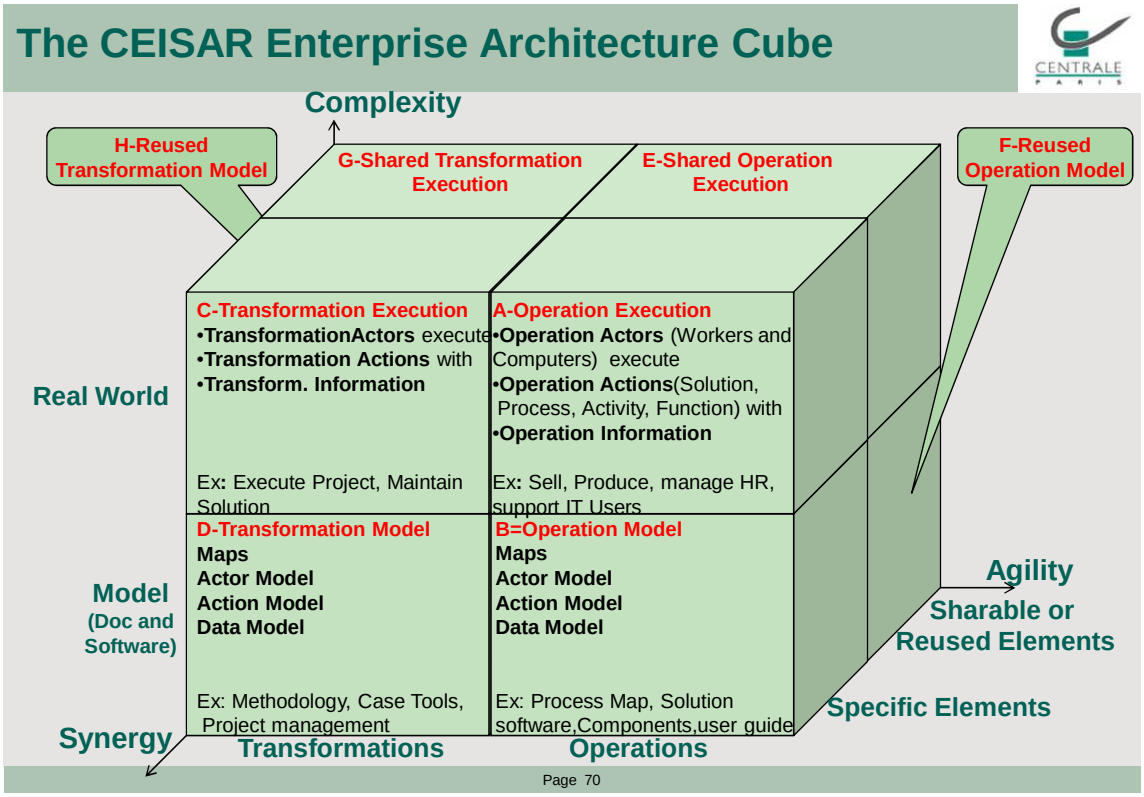
- Complexity: isolates Enterprise Real World from Enterprise Model.
- Agility: isolates Enterprise Operations from Enterprise Transformations.
- Synergy: isolates Specific Elements from Shared Resources and Reused Model.

Enterprise Architecture

Defines together

- How an Enterprise is Operated
- How an Enterprise is Transformed

The Enterprise Model Representation is described as a Cube:



Enterprise Model

Operation Model and Transformation Model.

Entity

An Entity is a set of real world objects which have same Attributes and same behavior (same Life cycle and same Functions).
An Entity can be a Business Entity or an Organization Entity.

Entity Pattern

Each Entity has its life cycle. Many life cycles are similar: we have formalized the most common life cycles in the Entity Patterns: Operation, Descriptor, Stock and Multi-Application Process.

Enumerated Type

Type which proposes a pre-defined list of values. These values are often expressed in business terms and not necessarily in technical terms. Example: Type “Sex” = (male, female, unknown)

Event

A Business Event triggers an End to End Process.
An Organization Event triggers an Organization Process.

Executed Solution

Execution of a Solution Model for an Enterprise.
An Executed Solution includes not only the executed Actions but also its Resources: Organization Actors and Information. If these Resources are not private to the executed Solution, but shared with other executed Solutions, they are part of “Shared Resources”.

Extended Enterprise

Enlarges Enterprise Scope to partners, providers and Customers when they become organization Actors.
Example: when an Enterprise sells its Products through distribution networks which belong to other Legal Entities, we must define Cross Processes and standardize Business Entity definitions and identifiers, which means that together they represent a global Enterprise, the Extended Enterprise

Function

Action inside an End to End Process. A Function may reuse other Functions.
A Function is a Business Function or an Organization Function.
A Function software is also called a Software Service.

Function Kind

Enumerated Type which represents the Function action:
“create”, “modify”, “delete”, “consult”, “show historic” are standard actions for Descriptors, “suspend”, “execute”…. have been added for Operation Patterns,
other specific actions can also be defined for each Business Entity.

Functional Domain

List of Functions or Functional Domains. Allows to simplify description of Rights, Competencies and Duties.

Global Model

Maps which offer a Global View of an Enterprise Model to better understand it: Process Maps, Entity Maps, Function Maps, Solution Maps and Block Maps are the most commonly used.

Governance

Art of making important decisions.

Group

Large Organization broken down into Companies. Group may share Solutions between Companies and define a Reused Model for Companies.

IT Service

What is delivered by Operations to Organization Actors (Workers or Automates).
The Desktop allows to launch IT Services. An Activity is an IT Service.

Legal Entity

Has a legal existence and is not a Person. A Legal Entity is not an Organization Unit. Legal Entities can be linked through "stock participations".
Example: corporation, administration, financial institution, association, a governmental Organization, or a research center.

Location

Geographical Space used to define different levels of territories: country, town, district, campus, building, offices... A Location may have a Postal Address.

Map

Documentation representation which summarizes a Global view of Enterprise Model like Process Map, Entity Map, Function Map, Software Service Map...

Model

Documentation or Software which formalizes the real world. See Operation Model and transformation Model.

Multi Application Process

A Multi Application Process is a Process Pattern with several successive irreversible Operation Applications, which means several Operations.
Example: for the Business Process "Subscribe for a Loan" there exist successive Operation Applications: the bank agrees to loan, the customer accepts the loan, the loan is activated at the Right time.

Offered Group of Services

Group of Offered Services which can be subscribed together.

Offered Product

That which is defined by marketing and proposed to prospects or Customers.
It is defined by: breakdown into Offered Services, eligibility Rules at Product level, Pricing Rules at Product level (one time or periodic).

Offered Service

Service which is offered to a Beneficiary if a Contract is active and a Service is required.
Example: Service "repair of a car" for an insurance Contract, Service "money transfer" for a banking Contract, Service "telephone call" for a "telecom contract"
It includes: condition Rules, evaluation Rules to evaluate the Delivered Service, Pricing Rules if Delivered Service has a cost.

Operated Solution

Solution Operated for an **Enterprise** according to its **Solution Model**.

Operations

Groups all Operation Actors with all Operation Processes they can execute and all Operation Informations.

Operation Actor

Actor who executes Operation Processes. Ex: salesman, clerk, branch manager…

Operation Application

Set of irreversible Functions executed once for each Operation instance when it is complete, checked and authorized. An Application is a Business Transaction.

Operation Execution

Actions executed by Enterprise Operations with their Operation Actors and Operation Informations.

Operation Functions

Functions executed in Operations Processes as: read Customer Data or Compute Price.

Operation Information

Information used by Operation Processes as: Customers, Products, Contracts, Accounts…

Operation Model

Model (documentation and software) for Operations which includes:

- Operation Global Model (Process Map, Function map, Service Map, Entity Map)
- Operation Detailed Model (Actor Model, Action Model and Data Model).

Operation Pattern

Defines an Entity life-cycle: an Operation is prepared in one or several steps by one or successive IT Users. When an Operation is Applicable (validity of data and authorized), it can be Applied, which means that irreversible actions like the updates of other Entities can be performed.
An Operation can be Applied just once. After being Applied, the Operation can be kept persistent or archived. All Operations which enter the IS must be signed by an IT User so that it is possible to track who is responsible for changes and when these changes occurred.

Operation Process

Process for Operations like

- Primary Processes: Manage Product, Sell, Produce, Deliver
- Resource Processes: Manage Employees, Manage IT, Manage facilities
- Management Processes: provide aggregated Information to managers

Organization

Hierarchy of Organization Units which all depend on the same Organization Unit.
Example: a region composed of regional headquarters plus regional branches is an Organization, just as the whole company composed of the different regions + company Headquarters is also an Organization.

Organization Actor

Worker (a Person) or Automate (a Computer) or Assisted Worker (Person + Computer) executing Activities. An Organization Actor belongs to a Position.

Organization Entity

Entity which helps to describe the Organization System.
Example: Organization Actor, Organization, Organization Unit, Role, Right, Duty

Organization Function

Function which only exists for Organization purpose like: "Authorize Function", or "send to To Do List of an Actor", or "find next Actor" (used by workflow engine). Do not confuse with Business Function.

Organized Process (or Organization Process)

Sub chain of Actions of an End to End Process which are executed by the same Organization Unit.
"Execute a Customer order" is an End to End Order broken down into 2 Organized Processes, "Enter Order" triggered by the Customer request and "Deliver Goods" triggered by an Organization Event (such as: truck is full).
An End to End Process may correspond to a single Organized Process. An Organized Process may execute several Instances of End to End Processes (ex: "Deliver Goods" groups deliveries).

Organization Unit

Node of a hierarchical structure like a Direction, a Department, a Branch. The smallest Organization Unit is the Position.
Attributes of the Organization Unit:
Type of the Organization Unit (department, division, branch…)
Organization Unit Role,
Position of Organization Unit leader,
parent Organization Unit and sub Organization Unit (s)…

Position

Organization Unit which contains only one Organization Actor.

Process

Chain of Functions triggered by a single Event.
They can be classified according to different Dimensions

- End to End Process or Organized Process.
- Operation Processes or Transformation processes.
- Primary Processes, Resource Processes or Management Processes

Product

That which is defined by Marketing to be offered to prospects. In the service business, a Product is composed of Offered Services.

Profile

Right Profile is the List of Rights attached to an Organization Actor.
Duty Profile is the List of Duties attached to an Organization Actor.
The same Profile can be used by different Organization Actors.

Real World Execution

Set of Executed Solutions with their Resources and Informations.

Resource

What is necessary to execute an Action.
CEISAR focuses on 2 Resources: Organization Actors (Persons and Computers) and Information, and does not focus on other Resources like Facilities or Cash.

Reusable Component

Reusable piece of software with different levels of granularity.
A Component can be a Black Component or a White Component.

Reused Model

Model Element which is Reused.
Example: different Companies may Reuse the same Solution Model or same Application.
Example: different Projects may Reuse the same Software Services or the same Data Model..

Right

Ability of an Organization Actor to execute an Activity or a Function inside an Activity.
To avoid to describe Rights for all detailed Functions, a Right uses the Functional Domain which groups several related Functions.
A Function inside an Activity only belongs to one Functional domain.
The Attributes of a Right are:
  Functional Domain
  Right category: Operation Right, Valued Operation Right, Descriptor Right, Amount Right

Role

Right Profile and Duty Profile assigned to an Organization Unit (including Position) or a Worker.
Example of Organization Unit Role: Branch, Accounting Unit.
Example of Position Role or Worker Role: "Salesman", "Assistant".

Rule=Function

Service

Service is ambiguous: use rather:

- Delivered Service (Service delivered to Customer)
- or Software Service (callable piece of software)
- or IT Service (Service delivered to IT User by Operation System)

Session

A Session is the period of time during which the same Assisted Worker works on the same work station.

Shared

Shared is used for Real Life Synergy, while Reused is used for Model Synergy.
Example: Shared Operation Solution, Shared master Data.

Shared Operation Solution

Executed Solution Shared for several Companies of a Group (example: Group Procurement is centralized).

Software Service

Function Software.
A Software Service is a callable piece of software defined by an Interface (how to call it) and an implementation (how it works) that the caller does not need to know.
A Software Service is the smallest Component.
A Software Service can use other Software Services (call or inheritance): building a good structure of Services is the most difficult Task when designing an IT System.

Solution

The number of Actions is huge; they must be grouped.
The "Solution" groups several Actions and includes the Actors and Informations private to this group of Actions. Solutions may have different levels of granularity: a CRM Solution groups Processes, while a Pricing Solution groups Functions.
See: Solution Model and Executed Solution.

Solution Model

Documentation and software which formalize how a Solution works. The same Solution Model may be used for several Executed Solutions.

Stock

A Stock is a Descriptor which has a balance which can be updated by Operation Application.
Example: Inventory, Account.

Subscribed Service

Offered Services can be mandatory or optional.
If they are optional, we must describe in the Contract the Service that a Subscriber has chosen.

Subscriber

Person or Legal Entity who signs a Contract. Generally he or she is the Customer.

Synergy

Definition of Shared or Reused elements grouped inside "Architecture".
Company Synergy means Shared and Reused elements between Business Units of the Company.
Group Synergy means Shared and Reused elements between Companies of the Group

Transformation

Groups all Transformation Actors with all Transformation Processes they can execute and all Transformation Informations.

Transformation Actors

Actors who execute Transformation Processes. Ex: Project managers, Business analysts, Developers, Architects, Teachers, …

Transformation Functions

Functions used in Transformation Processes like: define requirements, design, program, test, integrate, optimize, accept, deploy, maintain, execute non regression tests, ...

Transformation Informations

Informations used by the Transformation Processes. Ex: requirements, Reusable Components, planning

Transformation Model

Model (documentation and software) for Transformation which includes:

- Transformation Global Model (Process Map, Function map, Service Map, Entity Map)
- Transformation Detailed Model (Actor Model, Action Model and Data Model).

Transformation Process

Process which Transforms the Enterprise. They are often summarized under the word 'Methodologies".
Ex: define an Enterprise road map, execute a Solution project, execute an Architecture project, deploy a new Solution,, maintain Solutions. Transformation Processes are built with Transformation Functions

Transformation tools

Map tools, design tools, upper case, lower case, programming language, quality check tools, teamwork tools, test tools, software configuration management, documentation tools, integration tools...

Type

Defines all possible values for an Attribute.
The Type defines the internal representation of an Attribute, its GUI representation(s) and associated rules (validity, computation, conversion).
Many Attributes may share the same Type.
Example:

- the Attributes “birth date” and “subscription date” have the same Type “date”
- the Attributes "color of the car" and "color of the dress" reuse the same Type "color", an Enumerated Type which takes the values "white", "black", "red", "blue", "yellow", "green", "brown"
- the Attribute "summary of a meeting" has a Type "text"
- the "Person picture" has a Type "image"

White Component

Component reused as a pattern at Transformation time (like inheritance of a Class or reuse of a common Type).

Worker

Person who executes Actions.