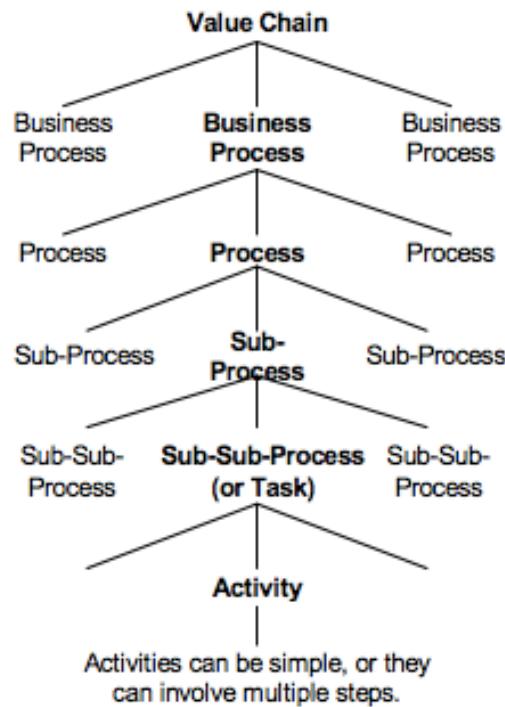


MODELO CONCEPTUAL – 2DA ITERACIÓN





Activities can be simple, or they can involve multiple steps.

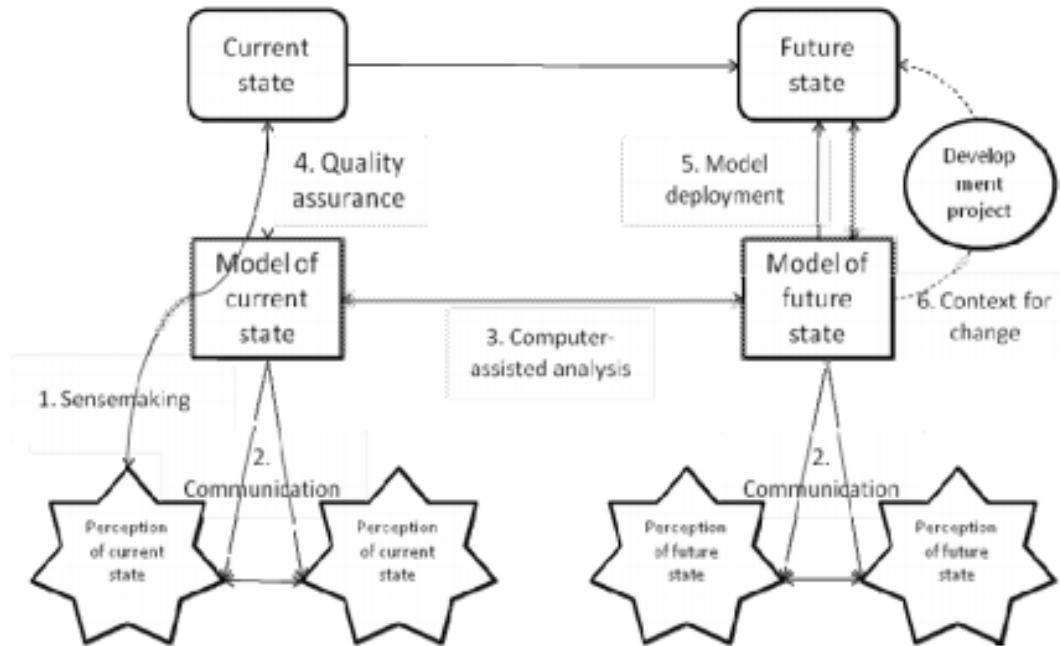
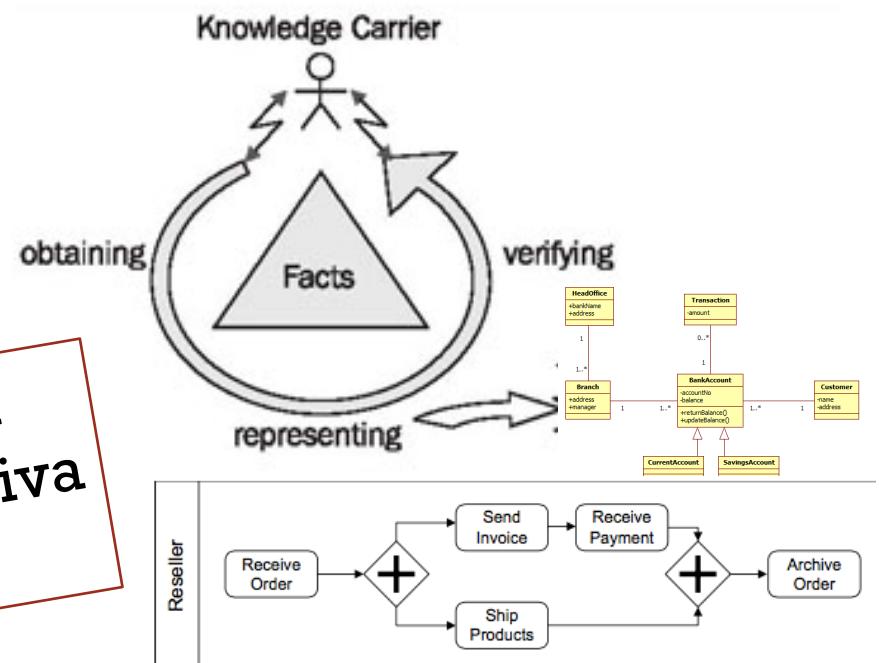
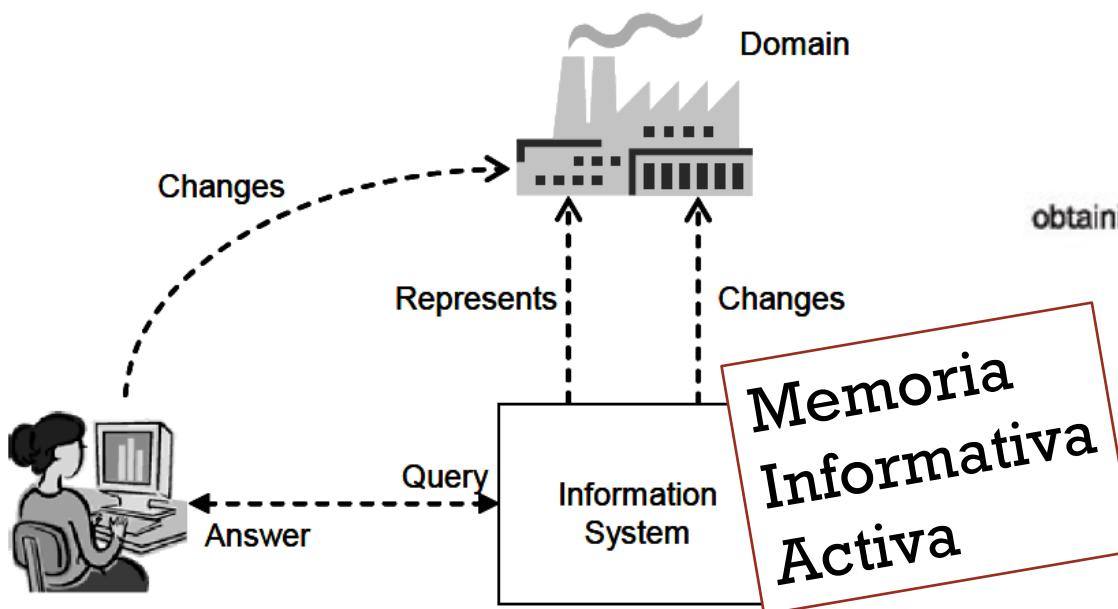


Fig. 1 Organizational application of modeling



BIBLIOGRAFÍA

- <http://www.uml-diagrams.org/class-diagrams-overview.html>
- <https://dzone.com/refcardz/getting-started-uml>
- <http://www.businessballs.com/business-process-modelling.htm>
- http://resources.bizagi.com/docs/BPMN_Quick_Reference_Guide_ENG.pdf
- http://www.omg.org/news/meetings/workshops/SOA-HC/presentations-2011/14_MT-2_Brookshier.pdf
- <http://www.bpmn-tool.com/en/tutorial/>

ESTRUCTURAL – DIAGRAMA DE CLASES

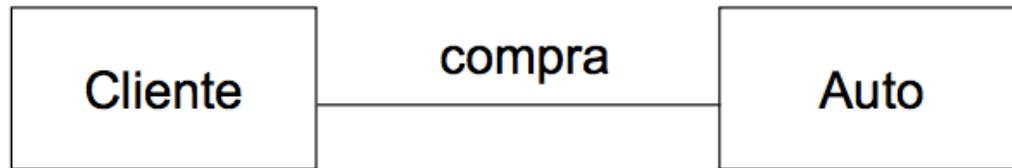
IDENTIFICANDO CONCEPTOS/ATRIBUTOS

Foco en los sustantivos, particularmente en:

- Objetos físicos o tangibles
- Lugares
- Transacciones
- Roles de la Gente (Cliente, Vendedor)
- Contenedores de Conceptos
- Otros sistemas
- Sustantivos Abstractos (“Sed”)
- Organizaciones
- Eventos (Emergencia)
- Reglas/Políticas
- Grabaciones/Logs

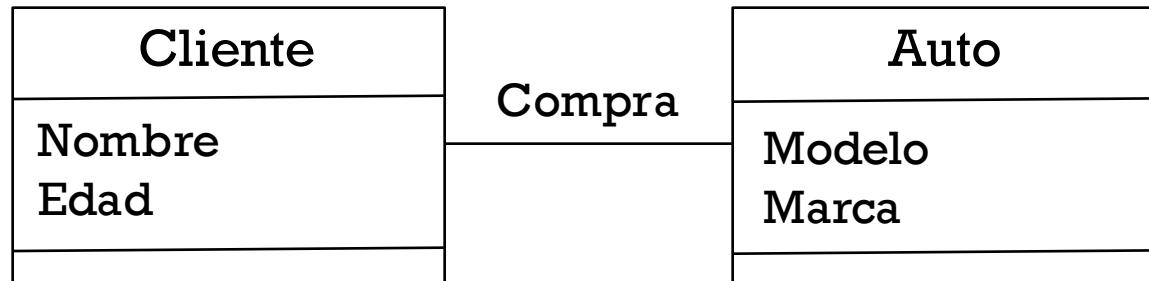
ACT1: CONCEPTOS Y RELACIONES

- Cajitas y líneas
 - Listemos los conceptos
 - Y las asociaciones entre ellos



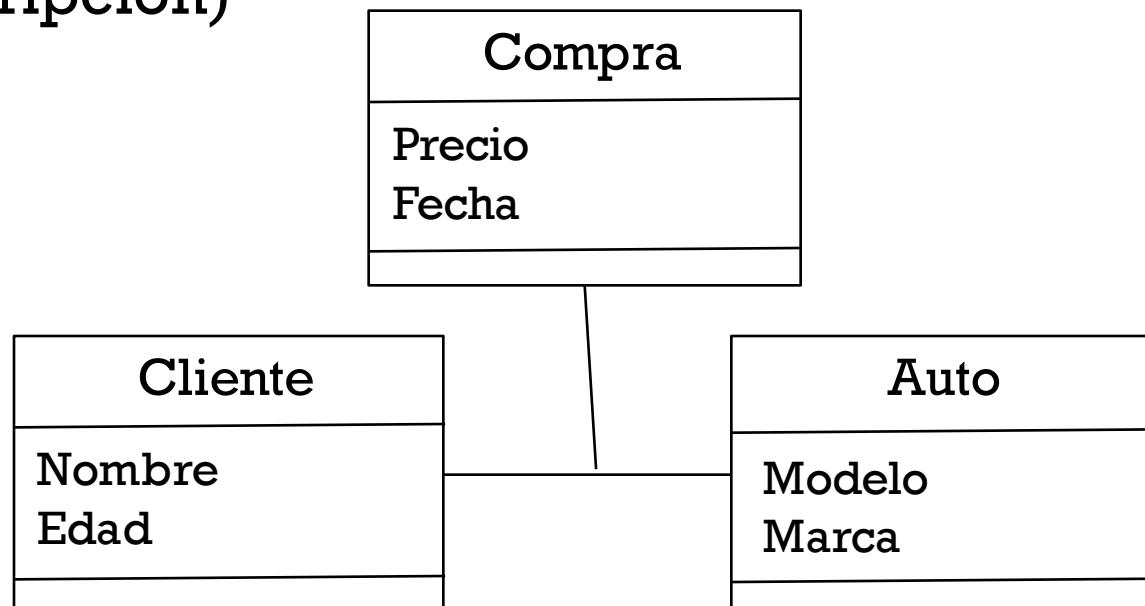
ACT2: ATRIBUTOS – CONCEPTOS SIMPLES

- Algunos de los conceptos son atributos de otros conceptos
 - Señal: Si el concepto es tan sencillo como para ser representado por un tipo básico (fecha, número, descripción)



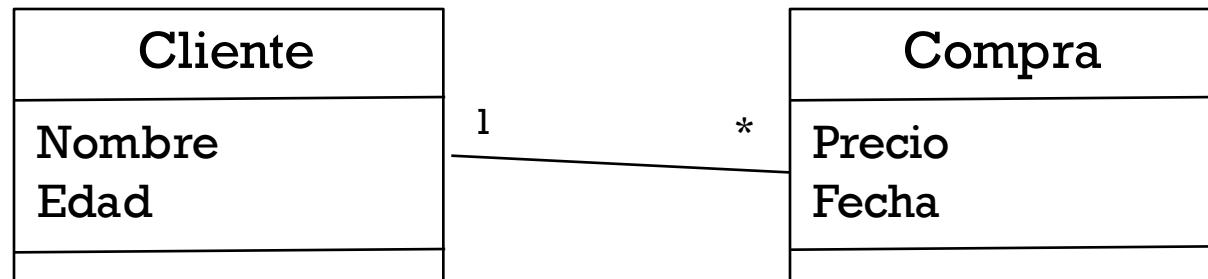
ACT3: ALGUNOS CONCEPTOS VIENEN DE ASOCIACIONES

- Algunos de los conceptos son atributos de otros conceptos
 - Señal: Si el concepto es tan sencillo como para ser representado por un tipo básico (fecha, número, descripción)



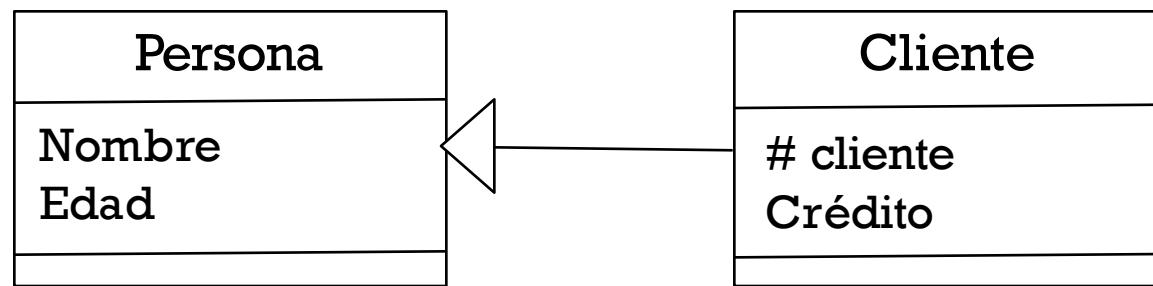
ACT4: CARDINALIDAD

- Las relaciones pueden ser mejor especificadas
- Cardinalidad dice cuántos de un concepto pueden estar relacionados a cuántos de otro concepto
 - 0..1, 1, 1..*, *, 1-8



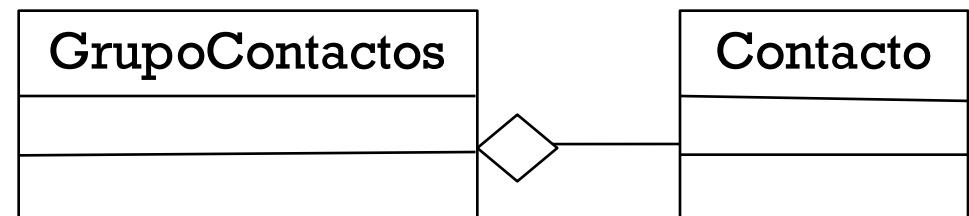
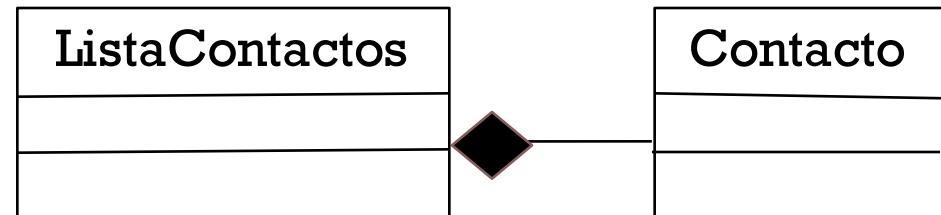
TIPOS DE RELACIONES

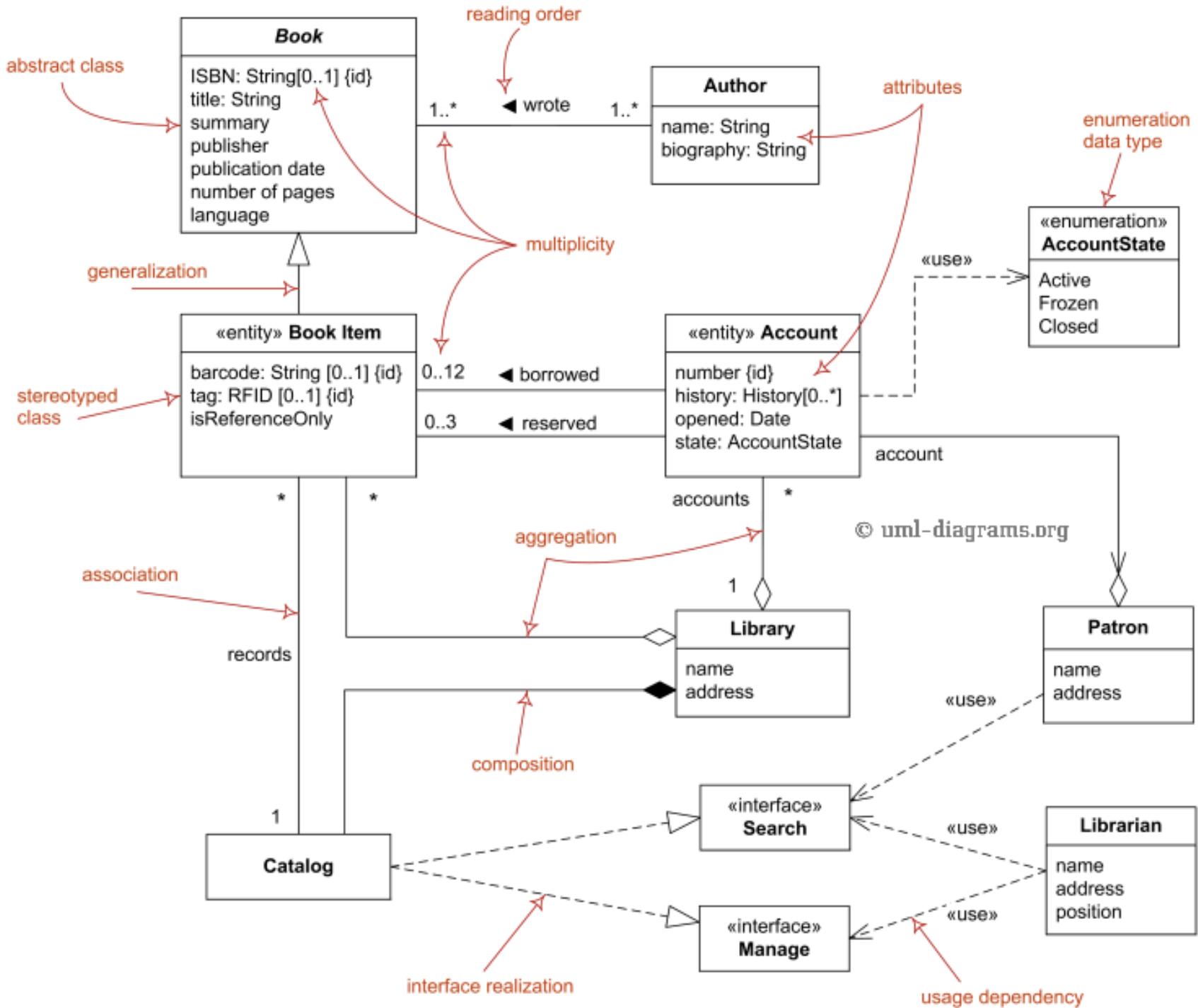
- “Es-un”: Super-clases y clases



ACT5: TIPOS DE RELACIONES

- Asociaciones fuertes o composición
 - Los conceptos contenidos sólo existen si existe el concepto contenedor
- Asociaciones débiles o agregación
 - Los conceptos contenidos pueden existir si no existe el concepto contenedor

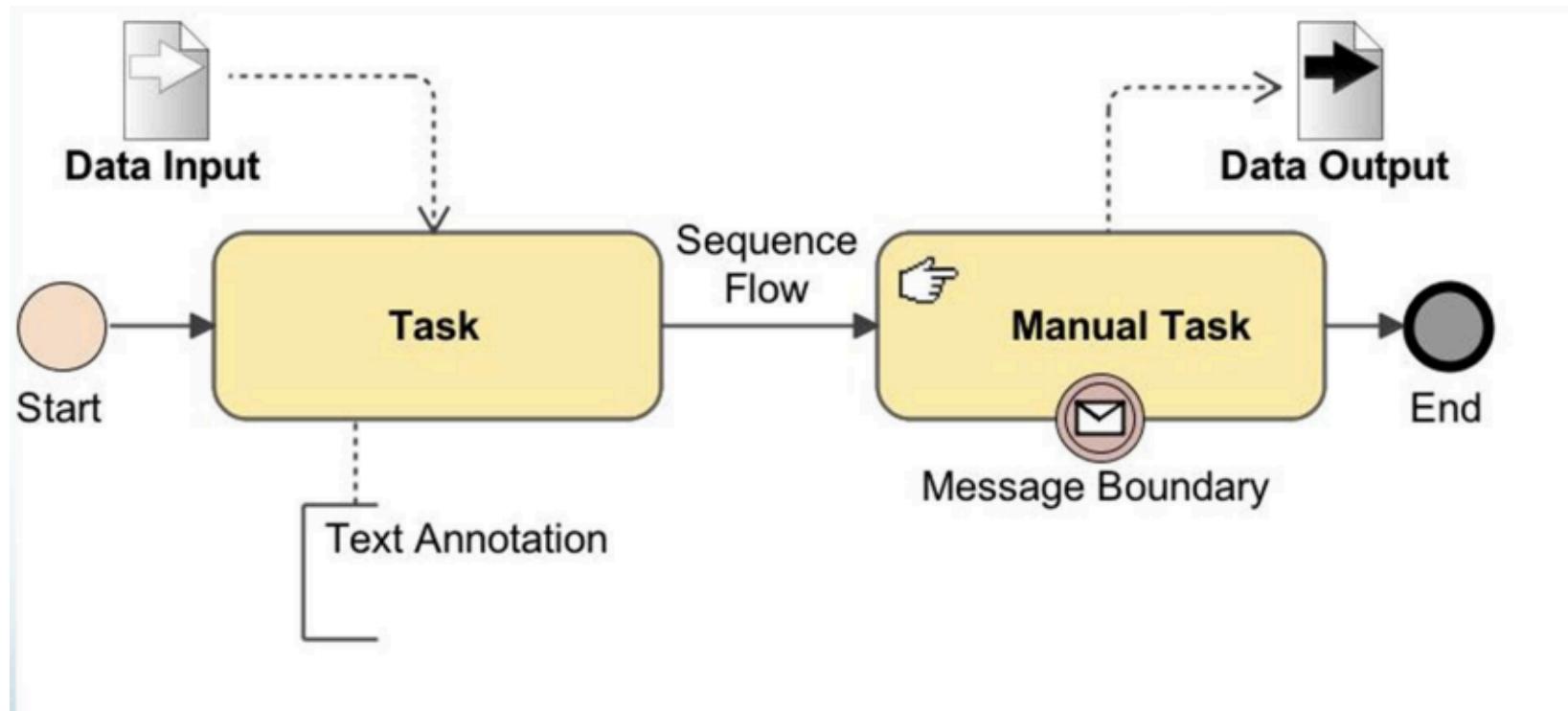




COMPORTAMIENTO – DIAGRAMA DE PROCESOS DE NEGOCIO

13

COMPONENTES PRINCIPALES



ACT1: ENTRADA Y SALIDA DEL PROCESO?



Start Events

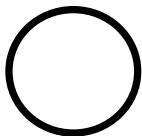


Intermediate Events

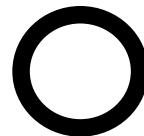


End Events

Pensemos desde el objetivo



Orden de
compra recibida



Venta hecha

Eventos: algo que pasa o puede pasar durante el curso de un proceso

Entrada: inicia el proceso, sin flujo de entrada

Salida: finaliza el proceso, sin flujo de salida, puede haber más de una salida

Intermedios: en medio del proceso, pueden capturar o lanzar un evento, pueden estar en el flujo o en borde de una actividad

ACT2: QUÉ ACTIVIDADES HAY ENTRE MEDIO?



Task



Sub-process

Actividades: representan trabajo desarrollado, un paso dentro del proceso, pueden ser atómicas o compuestas

Tarea: actividad simple y atómica (no se describe a más detalle)

Sub-proceso: actividad compuesta que se describe en más detalle en otro flujo



Orden de compra recibida

Chequear disponibilidad



Enviar item



Gestionar finanzas

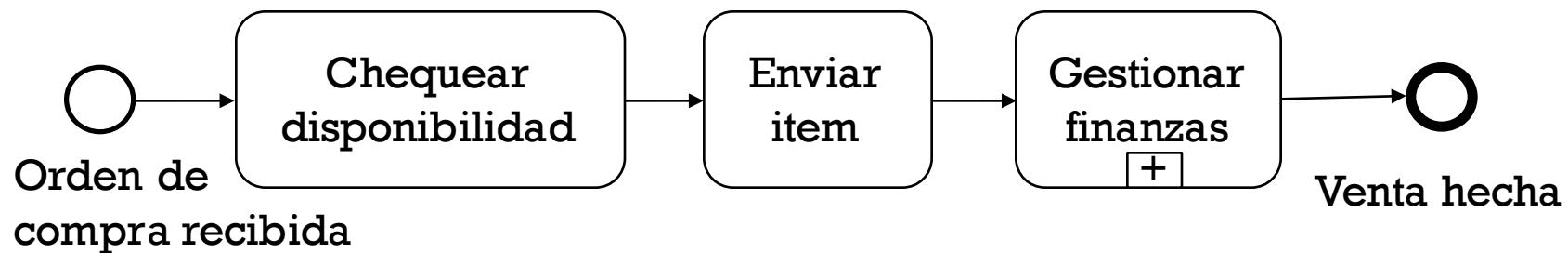


Venta hecha

ACT3: CÓMO SE RELACIONAN ESAS ACTIVIDADES?

→ Sequence Flow

Flujo de secuencia: muestra el orden en que las actividades serán desarrolladas



ACT4: HAY ALTERNATIVAS O ACTIVIDADES PARALELAS?



Gateways: son usados para controlar convergencia y divergencia de flujos

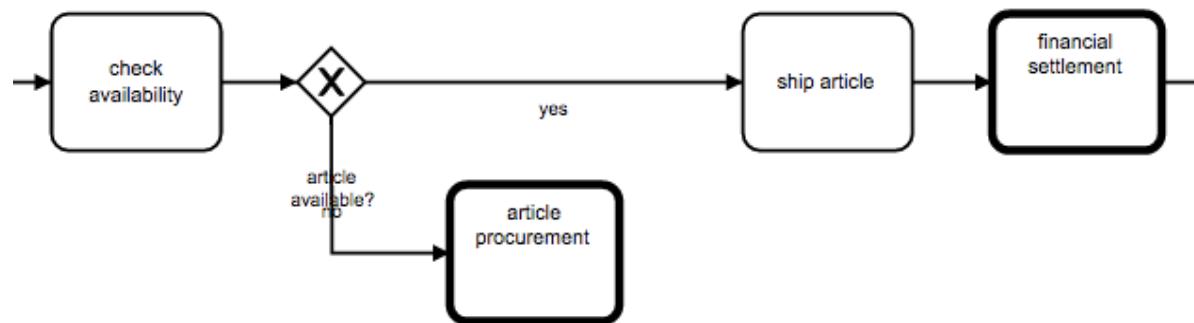
Exclusivo: Sólo una salida se puede tomar y une caminos alternativos



Inclusivo: Una o más salidas se pueden activar y ellas deben acabar para empezar lo que viene



Paralelo: Salidas se activan en paralelo y ambos deben terminar para empezar lo que sigue

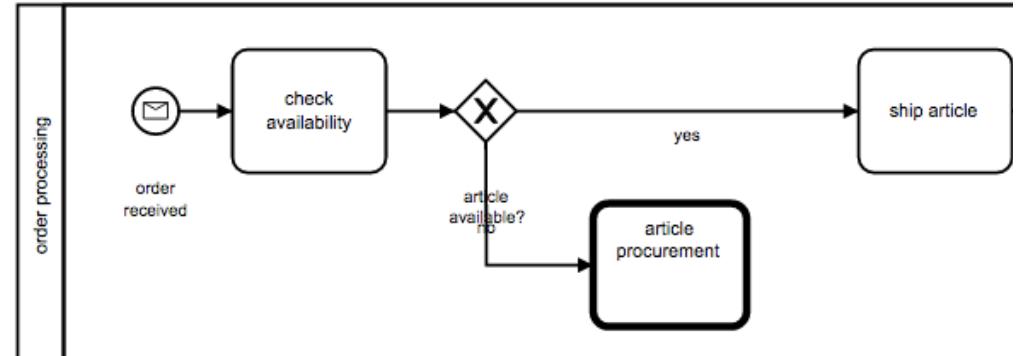


ACT5: QUIÉN ES RESPONSIBLE DE LAS ACTIVIDADES?



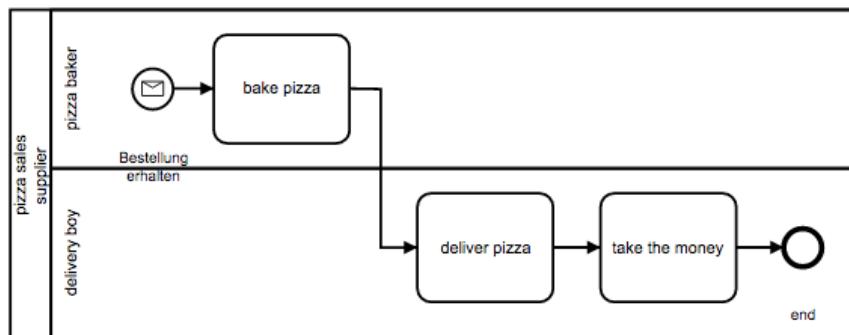
Pool

- A pool is a container of a single process.
- The name of the pool can be considered as the name of the process.
- There is always at least one Pool.



Lane

- A lane is a subdivision of a pool
- Represents a role or an organizational area.



ACT6: QUÉ DATOS/INFO ES RELEVANTE EN EL PROCESO?



Data Object

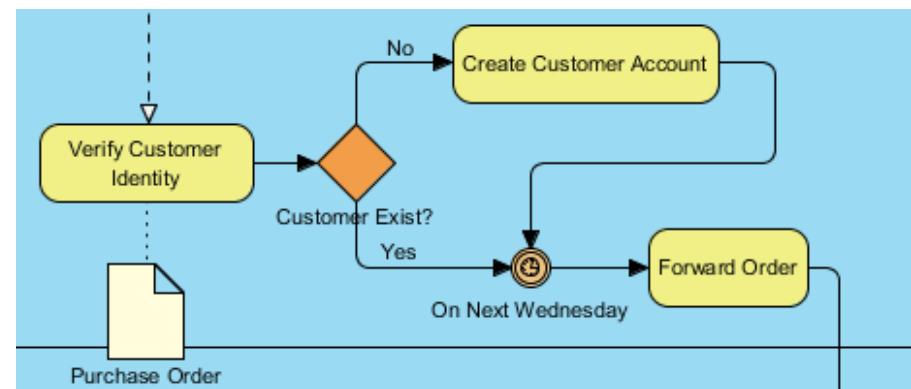
..... ➤ Message Flow

..... Association

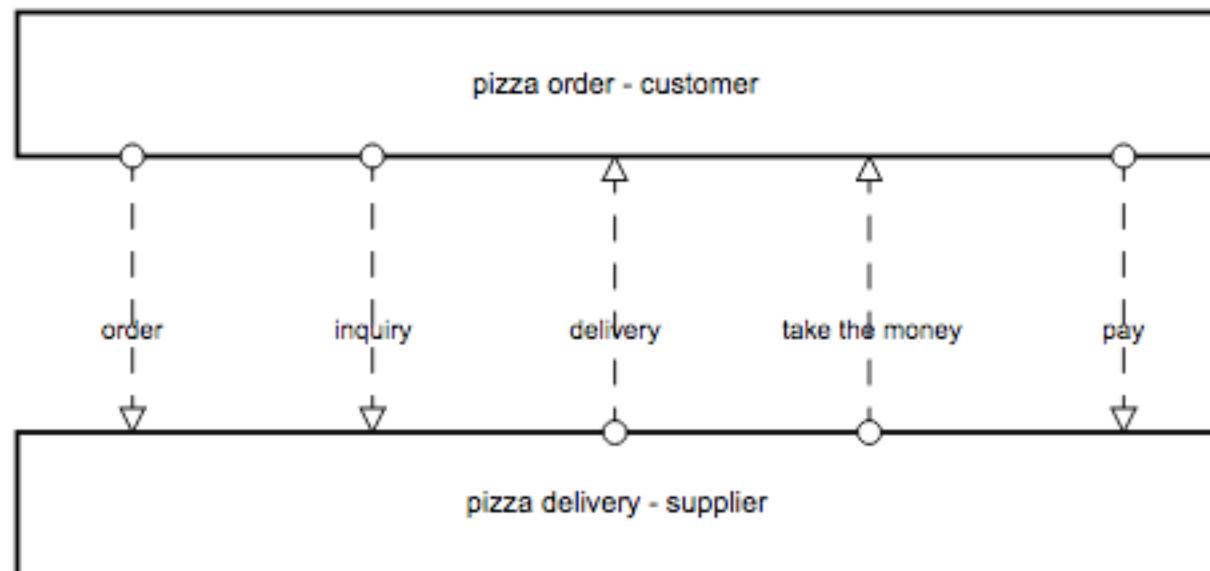
Asociación: asocia información y artefactos con flujos

Objeto de datos: Provee información sobre la entrada o salida de una actividad

Flujo de mensaje: muestra el flujo de mensajes entre entidades o procesos



ACT7: HAY PUNTOS DE INTERACCIÓN ENTRE PROVEEDORES Y CLIENTES, O CON OTROS PROCESOS?



MÁS DETALLE: EVENTOS



Message Start Event

A process starts when a message is received from another participant.



Timer Start Event

Indicates that a process starts at certain time or on a specified date



Conditional Start Event

A process starts when a business condition becomes true.



Message End Event

Indicates that a message is sent to another process when the process arrives at the end.

EVENTOS INTERMEDIOS



Message Intermediate Event

Indicates that a message can be sent or received. If the event is of reception, it indicates that the process has to wait until the message has been received.



This type of event can be used within the sequential flow or attached to boundary of an activity to indicate an exception flow.



Timer Intermediate Event

Indicates a waiting time within the process. This type of event can be used within the sequential flow indicating a waiting time between the activities or attached to boundary of an activity to indicate an exception flow when a time-out occurs.



Conditional Intermediate Event

Is used when the flow needs to wait for a business condition to be fulfilled. It can be used within the sequential flow indicating that it should wait until a business condition has been fulfilled or attached to boundary of an activity indicating an exception flow that is activated when the condition is met.

MÁS DETALLES: ACTIVIDADES



Embedded sub-process

Depends completely on the parent process.
It cannot contain pools or lanes



Reusable sub-process

Is a defined process like another business process diagram,
that does not depend on the parent process.



User



Manual task



Inclusive Gateway

Divergence: indicates that one or more routes can be activated from many available, and the decision is based on process data.

Convergence: indicates that many outgoing routes of an Inclusive gateway, used as an element of divergence, can be synchronized into just one.



Parallel Gateway

Divergence: is used to create parallel flow.

Convergence: is used to synchronize multiple parallel paths into one. The flow continues when all the incoming sequence flows have reached the gateway.



Data-Based Exclusive Gateway

Divergence: the Exclusive Decision has two or more outgoing Sequence Flows, but only one of them can be taken and the decision will be taken after evaluating a business condition.

Convergence: is used to merge alternative paths.



Event-Based Exclusive Gateway

Is used as a Divergence element. This gateway represents a point in the process where only one of many paths of the process can be selected but based on an event, not a data expression condition.



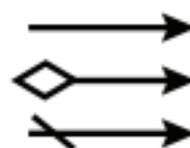
Complex Gateway

Divergence: is used to control complex decision points that are not easy to manage with other types of gateways.

Convergence: When the Gateway is used as a Merge then there will be an expression that will determine which of the incoming Sequence Flow will be required for the Process to continue.

→ Sequence Flow

- Is used to show the order that activities will be performed in a Process.
- It is used to represent the sequence of the flow objects, where we find activities, gateways and events.



Conditional Sequence Flow
Default Sequence Flow



Annotation

- Provides additional information about the process for the reader.



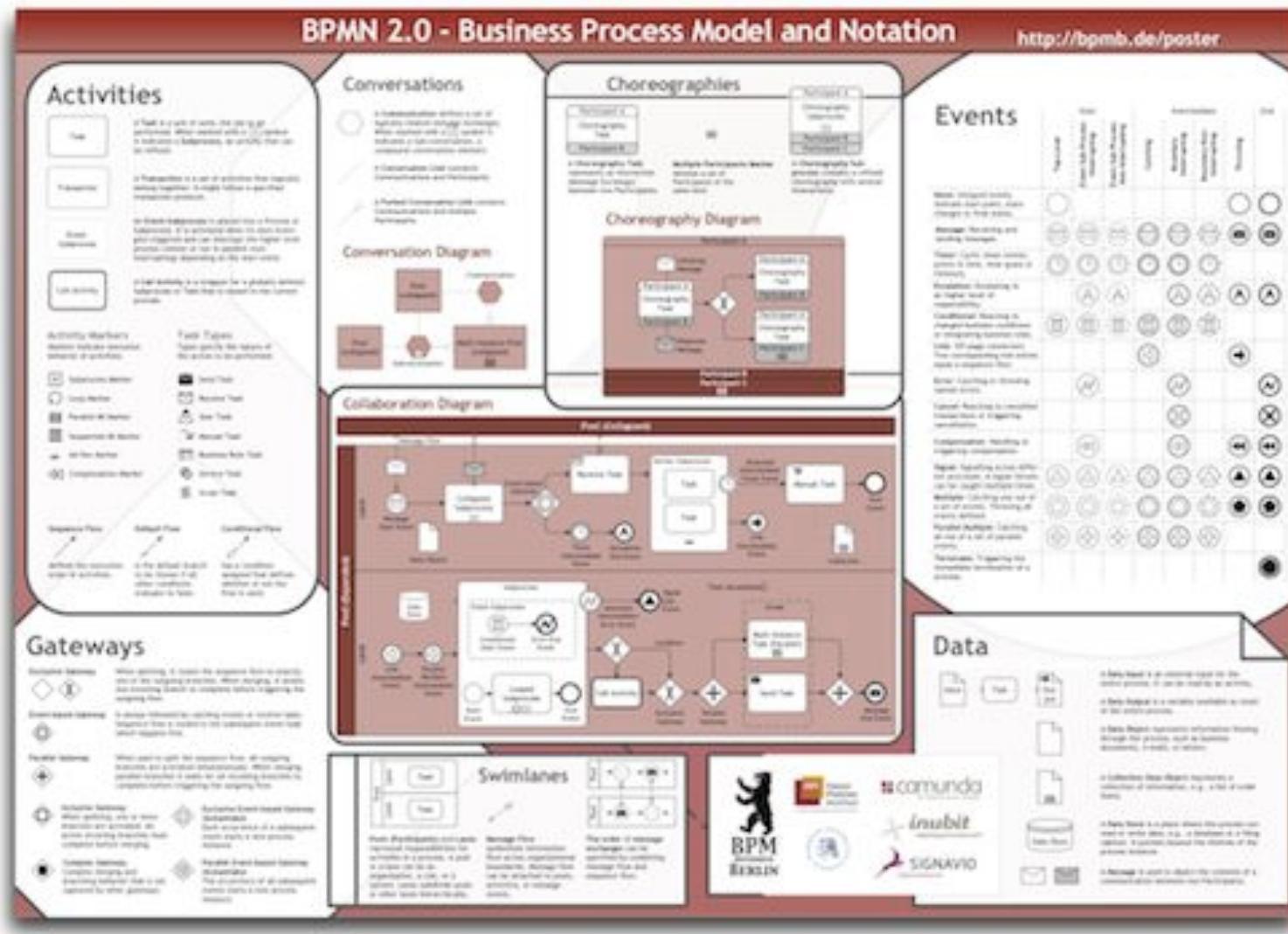
Group

- Is a visual mechanism that allows the grouping of activities for the purpose of documentation or analysis.

Data



HAY MUCHO MÁS DETALLE



<http://www.signavio.com/news/order-a-free-copy-of-the-brandnew-bpmn-2-0-poster/>