

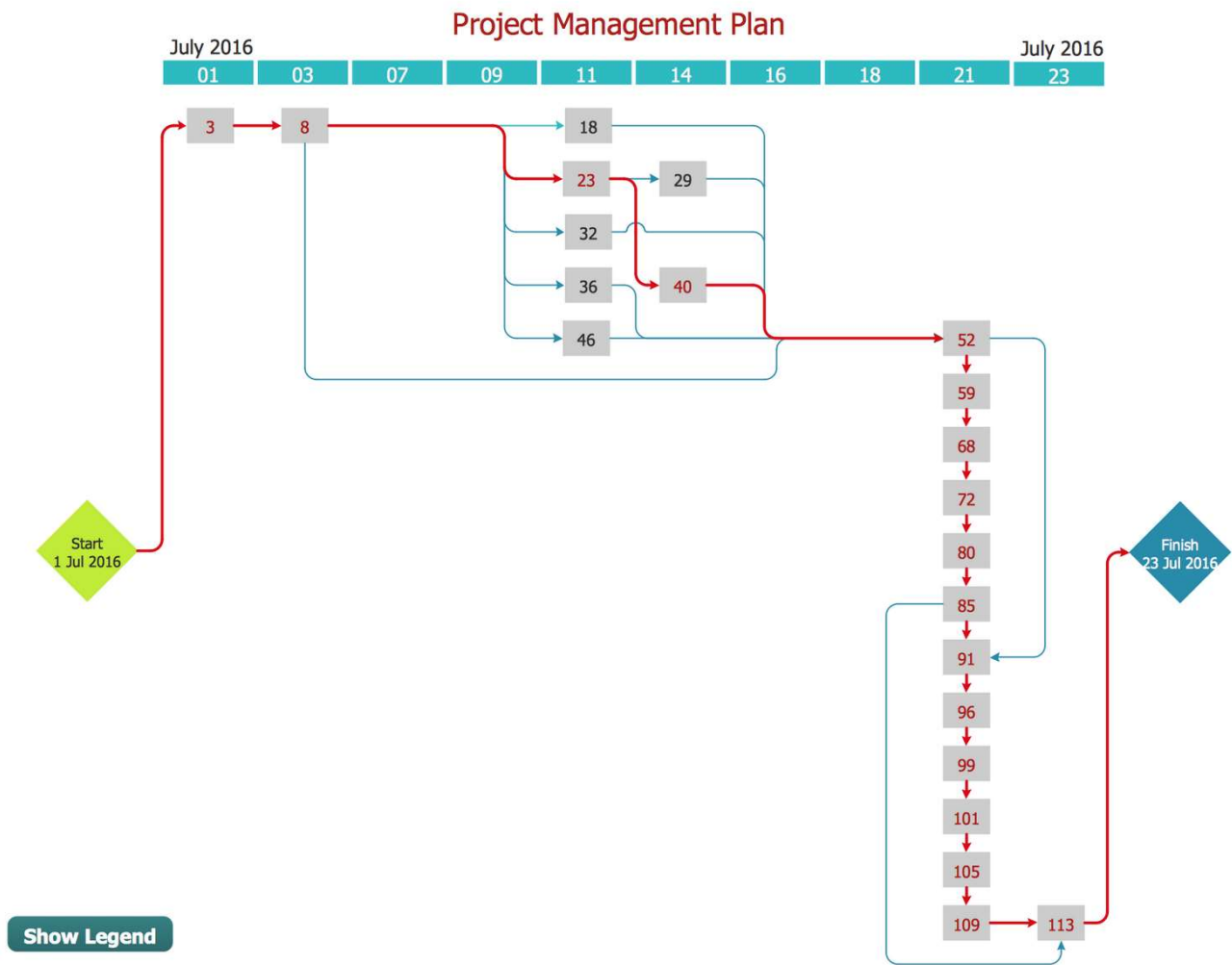
Program Evaluation and Review Technique (PERT) with ConceptDraw DIAGRAM

PERT method (Program Evaluation and Review Technique) is developed by the Ministry of Defense of the USA in 1958 in the framework of the project Polaris. PERT diagram is one of the tools for project management. With its help it is possible to analyze the time which is necessary for project execution and the consequence of tasks which involved into the project. The main advantage of such diagram type over the other diagram types is the possibility of calculation of the project fulfillment critical path that is the consequence of tasks which has the minimal float for execution and on which the total time for the whole project execution depends. If the task on the critical path is delayed than the execution of the whole project is delayed. There for it is important to calculate the critical path of the whole project execution and pay the most attention to tasks which appear on this way.

PERT Diagram is a more realistic approach of a project's time estimate analysis. After PERT chart was constructed user can discover the shortest possible duration for entire project timescale. The project timeline is the longest chain that might be taken with connected tasks on the PERT Diagram. Completion of serial tasks need to be accomplished in a presented order. At a project timeline can be independent tasks that not linked with main sequence they are called parallel tasks. PERT diagram is more suitable for Critical Path Analysis than Gantt chart for the reason that it undoubtedly better figure task dependencies. Project managers customarily utilize both methodologies.

It should be considered that PERT diagram does not give you ready concrete decisions but it helps you to find these decisions.

PERT diagram is constructed by definite rules. It represents the set of tasks, connected between each other in the consecution of their execution.



PERT benefits:

With a PERT method users can decide how to split project phases and choose the tasks' specification and dispose relations between them.

Different contractors involved in the project can coordinate the work on their tasks.

PERT determines schedule based on the availability of resources assigned to project tasks.

Decrease completion time of different tasks or supposed additional actions.

PERT utilizes resources within flexibility for implementing a thrift.

Attracting more management attention to critical stages of the project.

There are two variants of PERT diagram construction. In the first variant the duration is denoted on arrow connecting diagram nodes. Such diagram type is called AOA (activity on arrow).

The second type of PERT diagram is called AON (activity on node). In such diagram the information about the task duration is denoted in the diagram node and each task is represented in the form of rectangle with the definite set of fields. These are the task name, duration, early and late starts and early and late finishes of the task and also the float for execution of the given task.

Early Start	Duration	Early Finish
Task Name		
Late Start	Slack	Late Finish

Pic 1. PERT Diagram — AON (activity on node)

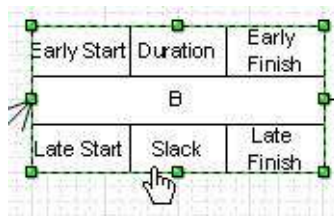
With the help of ConceptDraw you can build diagrams of any type, but we recommend you using of AON variant, because such diagram type is easier for building and perception.

PERT diagram starts from the task which does not have duration and does not use resources and presents just a project start. This is done to denote the common start of the project as starting from the first day of the project several tasks are starting simultaneously. Analogously PERT diagram finishes with the task “finish”.

0	0	0
Start		
0	0	0

Pic 2. PERT Diagram

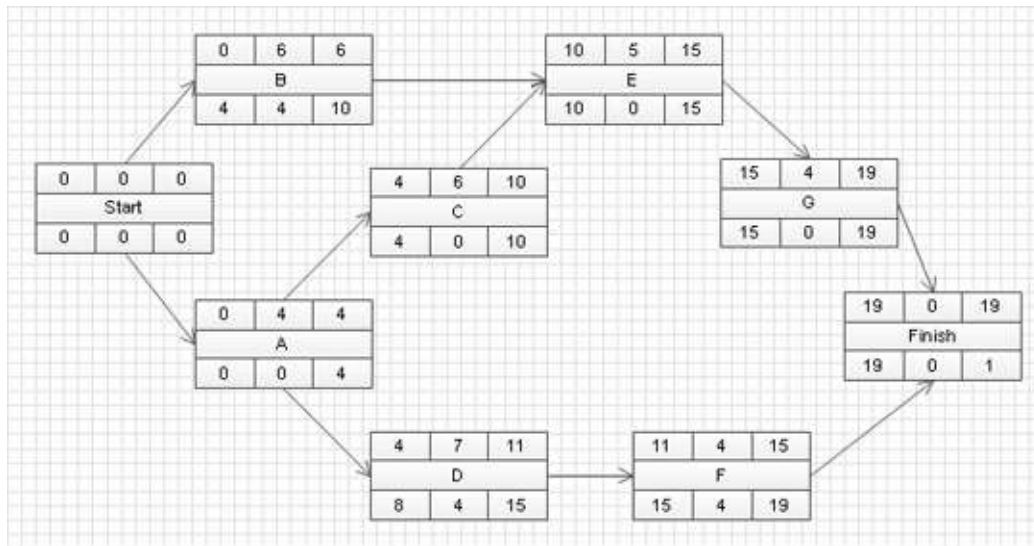
No task is able to start before the preceding task is finished. Also each task may represent a separate project with its subtasks, which can be displayed on a separate diagram. In ConceptDraw this can be realized in the form of hyperlinks assigned to such tasks. These hyperlinks may point at some pages of your ConceptDraw document where the corresponding PERT diagrams are placed.



Pic 3. PERT Diagram — Task

Objects for PERT diagrams building are gathered in a separate ConceptDraw objects library. To start working it is enough to launch PERT Chart template from ConceptDraw STORE.

To create a PERT diagram with ConceptDraw, it is enough to drag on a document page the number of ready objects, representing tasks, and then connect them between each other and fill out necessary task fields.



Pic 4. PERT Diagram with ConceptDraw

However, a Gantt chart gives more information than PERT diagram, and that assume to expand the information on it:

activity name

normal duration time

early start time (ES)

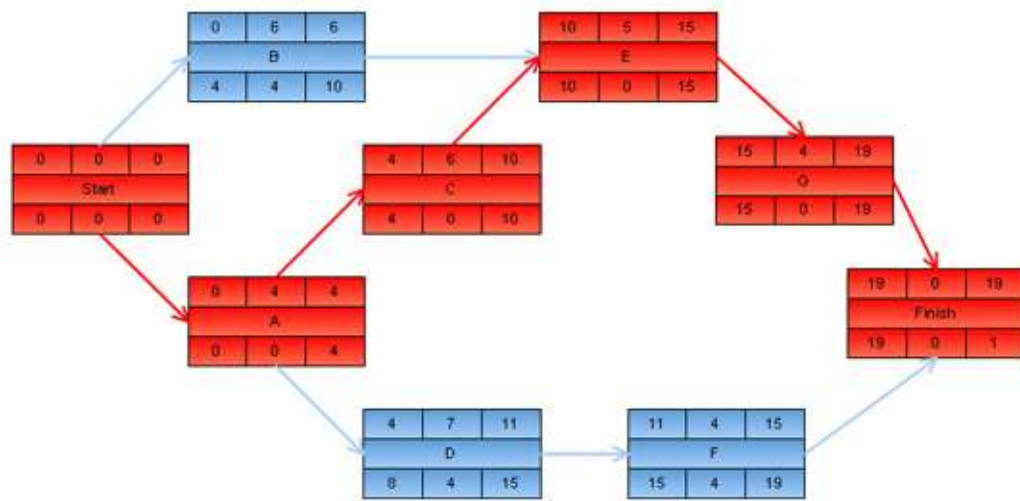
early finish time (EF)

late start time (LS)

late finish time (LF)

slack

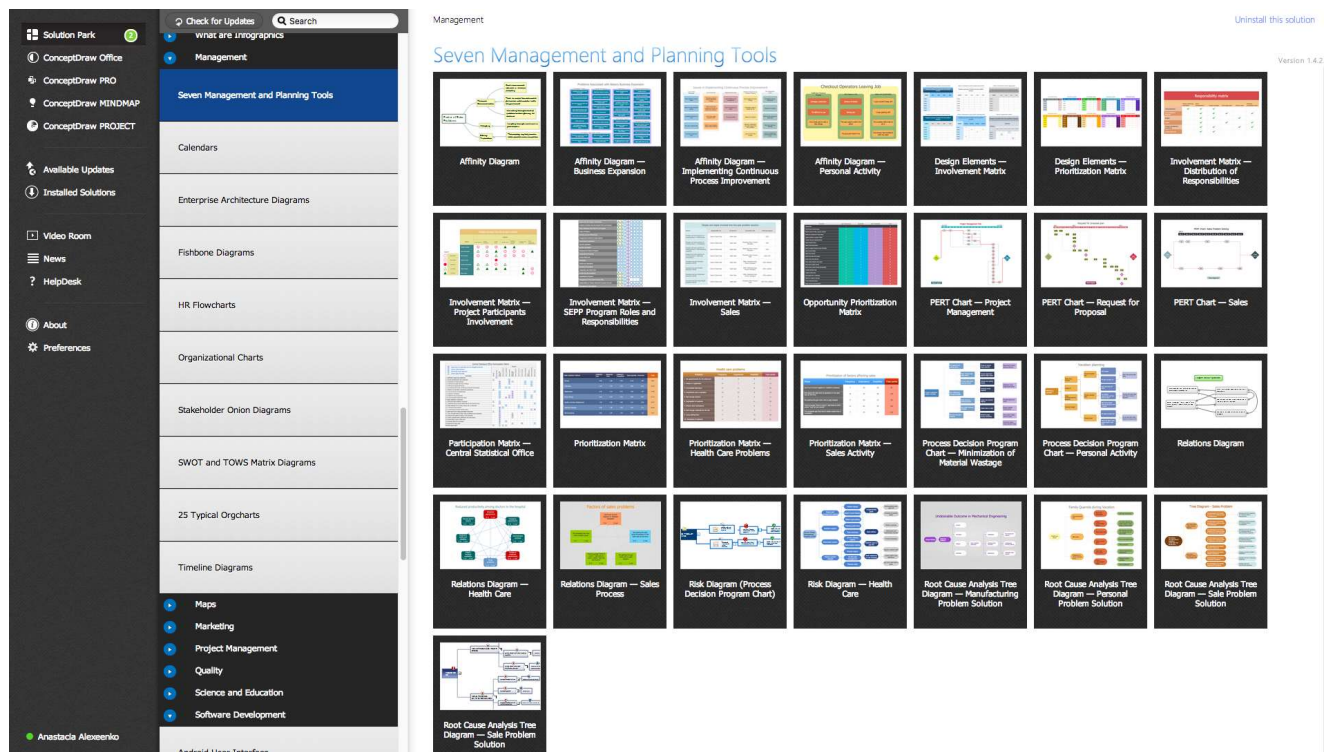
Task appeared on the calculated critical path are marked out with red color. This way any person is able to see at once tasks which require special attention.

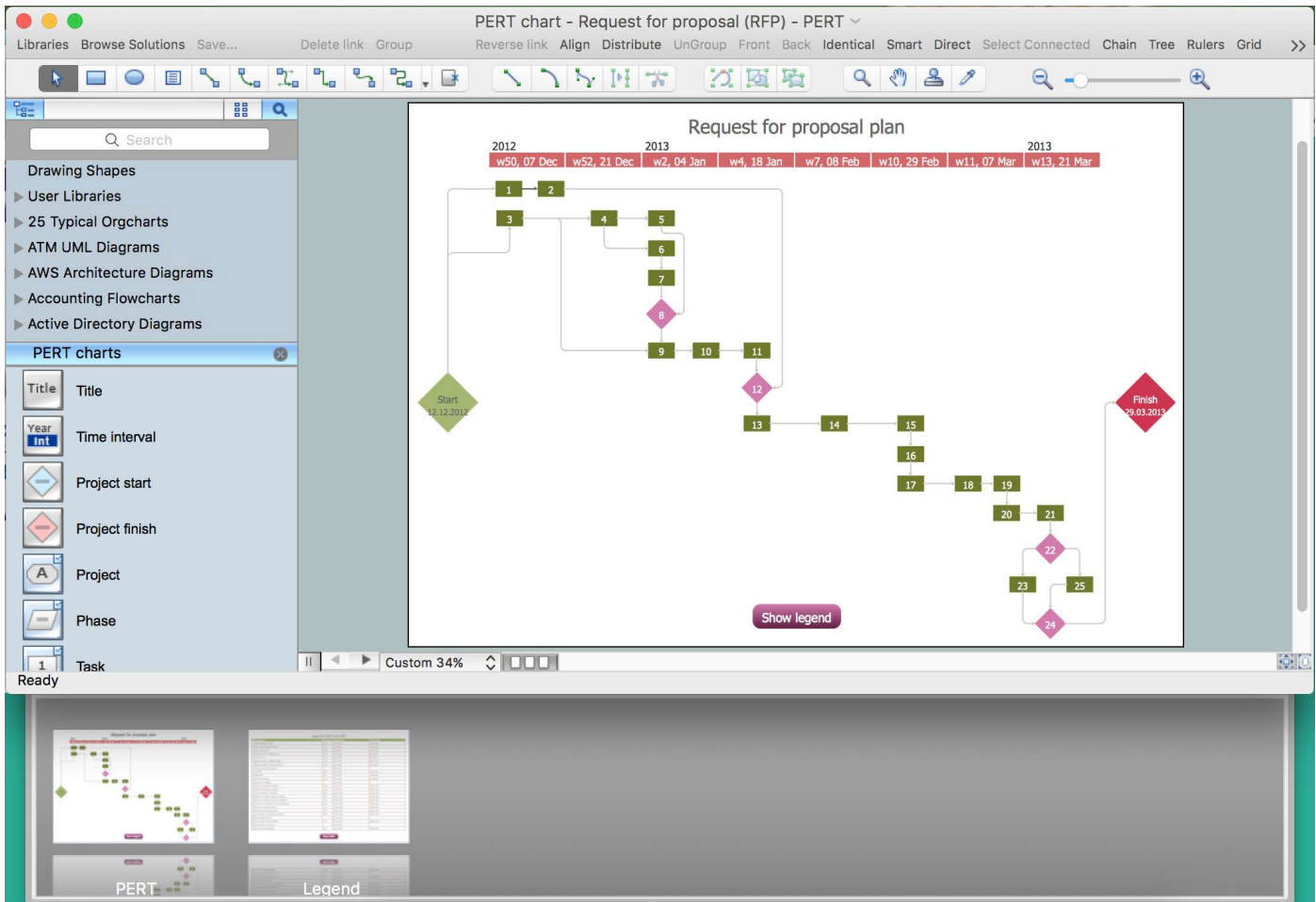


Pic 5. PERT Diagram — Critical Path

ConceptDraw PERT diagram software works across any platform, meaning you never have to worry about compatibility again. ConceptDraw DIAGRAM allows you to make PERT diagram on PC or macOS operating systems.

The samples you see on this page were created in ConceptDraw DIAGRAM using the [Seven Management and Planning Tools solution](#), and demonstrate the solution's capabilities and the results you can achieve using this solution.





Pic 6. Program Evaluation and Review Technique (PERT) Diagram — Software Development Plan

The following features make ConceptDraw DIAGRAM the best Program Evaluation and Review Technique (PERT) Diagram Software:

1. You don't need to be an artist to draw professional looking diagrams in a few minutes.
2. Large quantity of ready-to-use vector objects makes your drawing diagrams quick and easy.
3. Great number of predesigned templates and samples give you the good start for your own diagrams.
4. ConceptDraw DIAGRAM provides you the possibility to use the grid, rules and guides. You can easily rotate, group, align, arrange the objects, use different fonts and colors to make your diagram exceptionally looking.
5. All ConceptDraw DIAGRAM documents are vector graphic files and are available for reviewing, modifying, and converting to a variety of formats: image, HTML, PDF file, MS PowerPoint Presentation, Adobe Flash, MS Visio.
6. Using ConceptDraw STORE you can navigate through ConceptDraw Solution Park, managing downloads and updates. You can access libraries, templates and samples directly from the ConceptDraw STORE.

7. If you have any questions, our free of charge support is always ready to come to your aid.

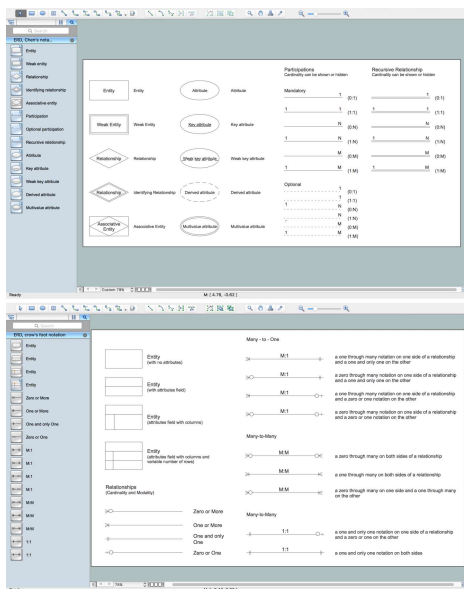
Related Solution:

Seven Management and Planning Tools

TEN RELATED HOW TO's:

Notation & Symbols for ERD

The ER diagram is constructed from the specific ERD graphic elements. There are used 2 types of ERD notations: Chen and Crow's Foot. A complete set of work flow shapes, notation & symbols for ERD, entity relationship stencils, included in Entity-Relationship Diagram (ERD) solution for ConceptDraw DIAGRAM software, makes drawing diagrams based on ERD notation as smooth as possible.

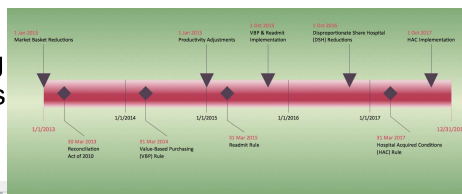


Picture: Notation & Symbols for ERD

Related Solution:

Timeline Examples

ConceptDraw DIAGRAM diagramming and vector drawing software offers the Timeline Diagrams solution from the Management area which is rich for the timeline examples, samples, templates and ready-to-use vector shapes.



Picture: Timeline Examples

Related Solution:

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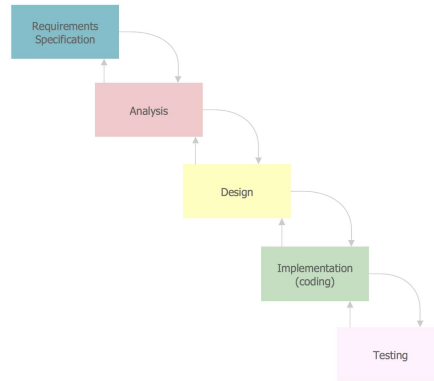
[Timeline Diagrams](#)

SSADM Diagram

The vector stencils library SSADM from the solution Systems engineering contains specific symbols of SSADM diagrams for ConceptDraw DIAGRAM diagramming and vector drawing software. The Systems engineering

[READ MORE](#)[Entity-Relationship Diagram \(ERD\)](#)

solution is contained in Software Development area of ConceptDraw Solution Park. The example below illustrates the waterfall model used in SSADM. This model involves 5 stages of developing a product such as requirements specification and its' analysis, design, coding and testing.



Picture: SSADM Diagram

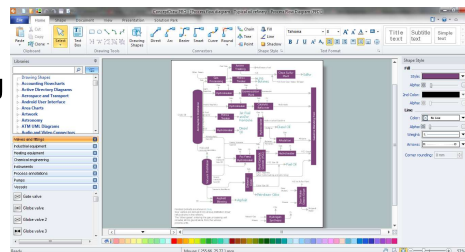
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Work Flow Diagram

Any flow diagram is a generic concept for a diagram that is depicting a flow or some set of the dynamic relationships that can be found within some system. The term “flow diagram” itself can also be used as a synonym for a flowchart or work flow diagram in case the representation of the work is mentioned. Any flow diagram can be sometimes seen as a counterpart of some flowchart being created with the help of the ConceptDraw DIAGRAM diagramming and drawing software as well as the Workflow Diagrams solution taken from the ConceptDraw STORE application.

Process Engineering

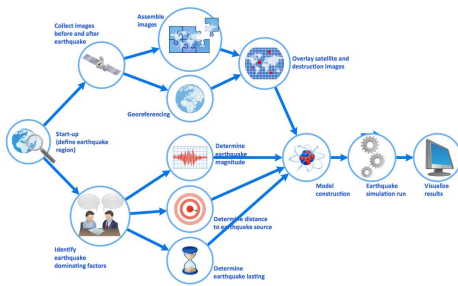
ConceptDraw DIAGRAM diagramming and vector drawing software supplied with Chemical and Process Engineering Solution from the Industrial Engineering Area of ConceptDraw Solution Park is powerful and effective process engineering software.



Picture: Process Engineering

Related Solution:

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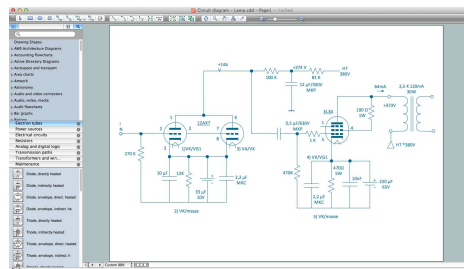
Picture: Work Flow Diagram

Related Solution:

[READ MORE](#)[Workflow Diagrams](#)

Electrical Drawing Software and Electrical Symbols

No building project can exist without an electrical circuit map. It's more convenient to develop electrical drawing with a proper software which would contain vector shapes and electrical symbols. This will help in the future if any problems appear. This circuit diagram shows the scheme of a location of components and connections of the electrical circuit using a set of standard symbols. It can be use for graphical documentation of an electrical circuit components. There are many of different electric circuit symbols that can be used in a circuit diagram. Knowing how to read circuit diagrams is a useful skill not only for professionals, but for any person who can start creating his own small home electronic projects.



Picture: Electrical Drawing Software and Electrical Symbols

Related Solution:

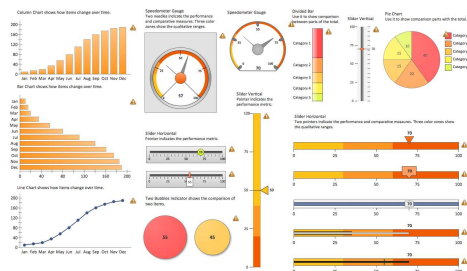
[READ MORE](#)[Electrical Engineering](#)

Customer Relationship Management

Network Security Model

Creation of well thought-out network security model will effectively help

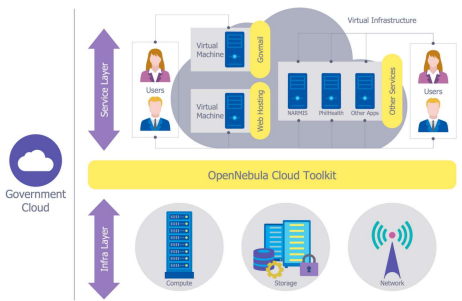
Customer relationship management is an important component of sales success. Visualizing sales data you may put some KPI related to customers relationship management to your Sales dashboard and track this important aspect in real time.



Picture: Customer Relationship Management

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you in realization your network's security. ConceptDraw DIAGRAM diagramming and vector drawing software extended with Network Security Diagrams Solution from the Computer and Networks Area of ConceptDraw Solution Park lets fast and easy design all variety of network security models: Open network security model, Closed network security model, Restrictive network access model.



Picture: Network Security Model

Related Solution:

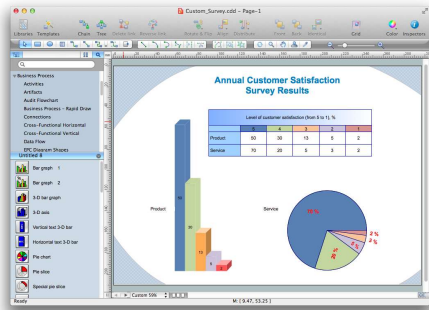
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[Network Security Diagrams](#)

Is ConceptDraw DIAGRAM Relationships Analysis an Alternative to Microsoft Visio?

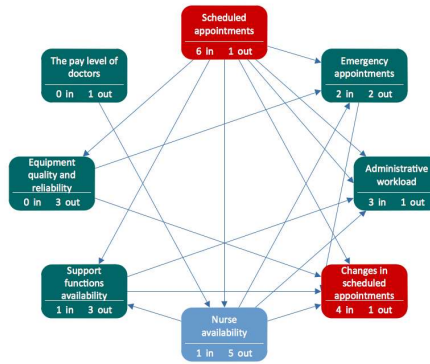
Visio for Mac and Windows - ConceptDraw as an alternative to MS Visio. ConceptDraw DIAGRAM delivers full-functioned alternative to MS Visio. ConceptDraw DIAGRAM supports import of Visio files. ConceptDraw DIAGRAM supports flowcharting, swimlane, orgchart, project chart, mind map, decision tree, cause and effect, charts and graphs, and many other diagram types.

Relationships Analysis. Relations Diagram - factors analysis, factors relations. Create Relations Diagram with ConceptDraw DIAGRAM. The Seven Management and Planning Tools is a tool for Interaction diagram drawing. This diagram identifies causal relationships. Determine what factors are causes and which factors are effects. Interaction diagram helps establish KPIs to monitor changes and the effectiveness of corrective actions in resolving the problem.



Picture: Is ConceptDraw DIAGRAM an Alternative to Microsoft Visio?

Reduced productivity among doctors in the hospital



Picture: Relationships Analysis

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