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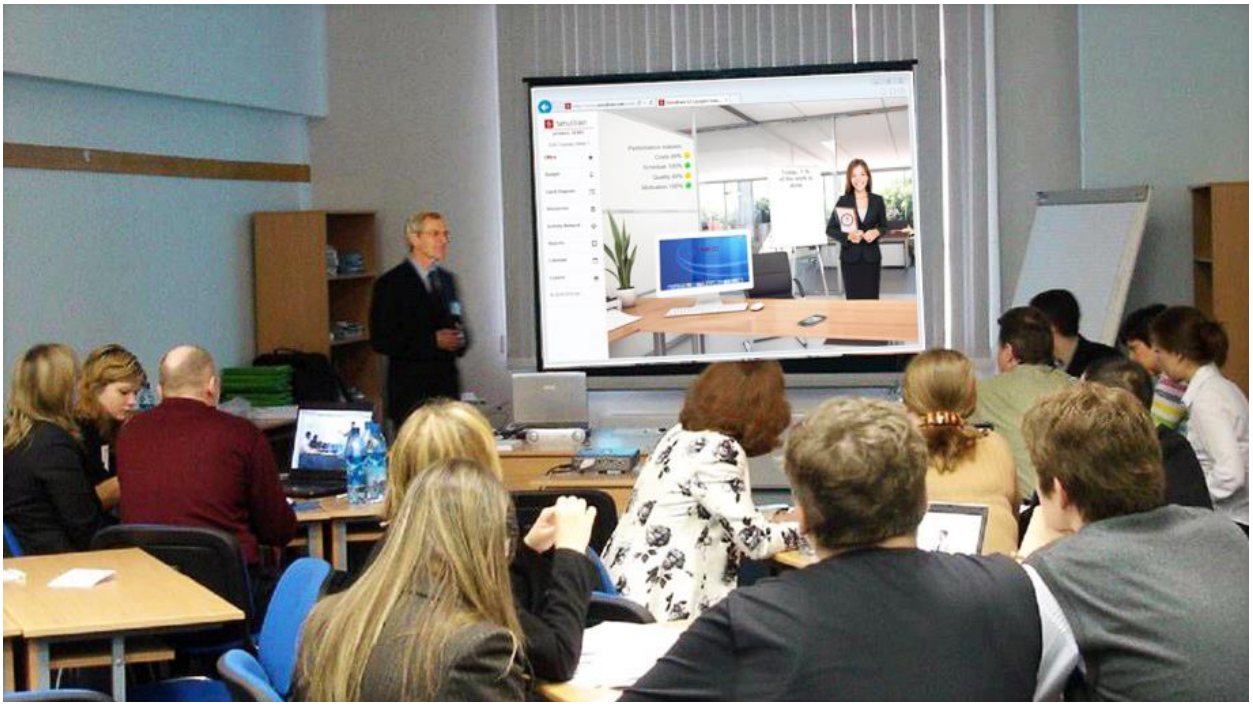
SimulTrain® Version 12.2

Trainer's Handbook



Lausanne, 2020-07-01

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1 INTRODUCTION

1.1 Training objectives

SimulTrain® is a simulation of the planning and execution of a medium-sized project. A **team of four** participants plays the role of a project manager. The "project manager" must finish the project plan and manage its execution.

SimulTrain® can be used in different ways:

- As an integral part of a project management training course.
- As a practical exercise for people who already have some training in, or experience with, project management.
- As a tool for strengthening team collaboration, allowing team members to get accustomed to working together in stressful situations.

SimulTrain® concerns training in two different domains:

- **Technical competencies for project management.**
- **Behavioral competencies for project management.**

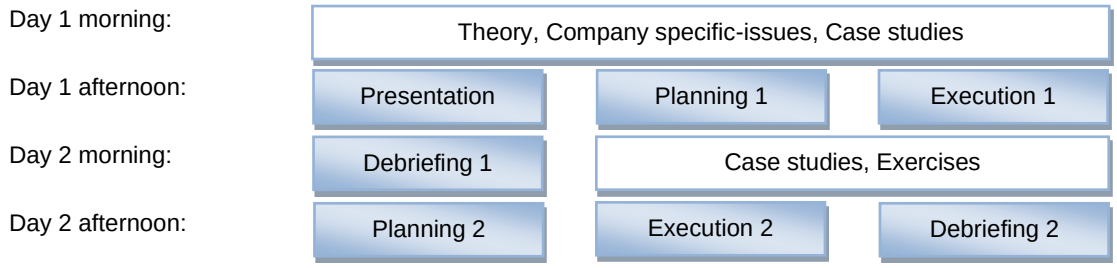
You can find a detailed list of these competencies in the document Doc 456, "Competencies learned with SimulTrain®."

1.2 Timetable

There are two versions of the simulator:

- **2 PERIODS**: The most popular version for corporate training, the total time required is *only* 6 hours. If you are using SimulTrain® in a training course that also includes client-specific case studies and exercises, we recommend that you run the simulation over two days. You have **one pause** during project execution. This version is mostly use for corporate training.
- **3 PERIODS:** This version is absolutely the same as the first, except that the session duration is longer. The total time required for the simulation alone is about 8 hours. You have **two pauses** during project execution. This version is mostly use for business schools and universities.

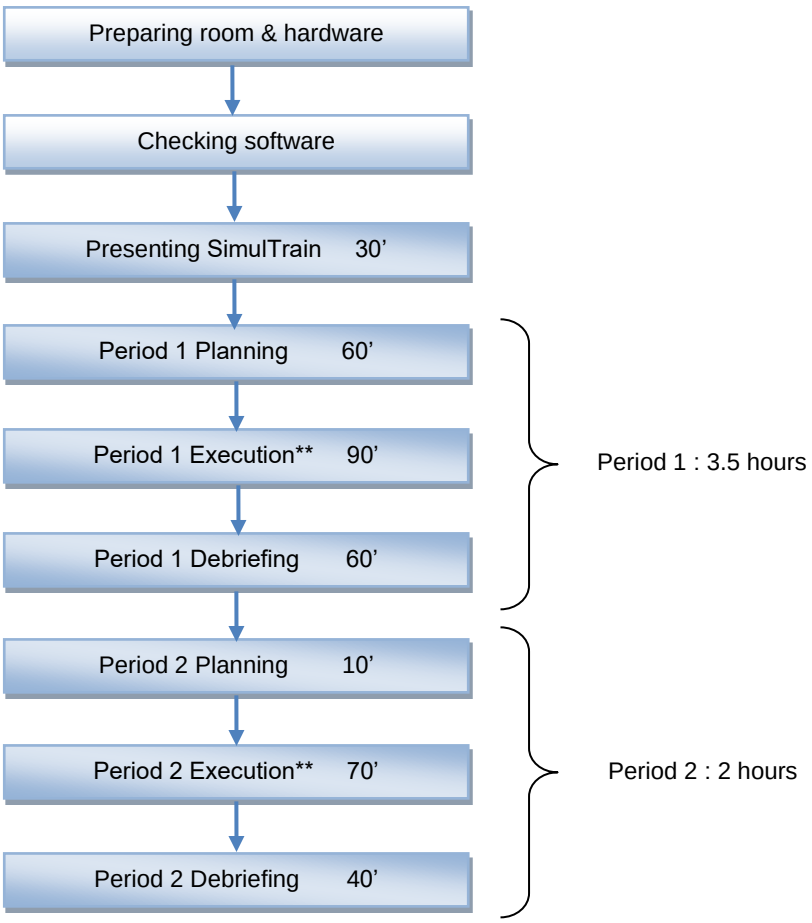
This is an example of two-day training:



Each period includes three phases:

- Planning of project resources and events,
- Execution four-week or eight-week period, and
- Debriefing & reporting.

This is a sequence of stages in a SimulTrain® session*:



* *The timetable does not include the breaks between the phases.*
** *Non-stop simulation.*

If you run the 3 PERIODS version, the duration of the third period is the same as for the second one.

Planning involves choosing team members and allocating activities to them. During this phase, the participants can always return and change some of the entries in the simulation. Once the planning is done, the trainer will launch the execution, during which the participants continue to improve the plan, assign meetings, and make decisions. After four weeks of project time, the simulator will automatically stop the clock. Then, you can discuss with the participants the situations that arose during the planning and execution.

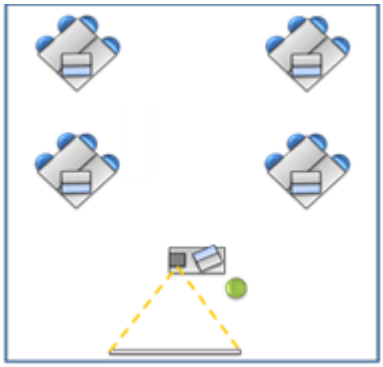
2 PREPARING THE TRAINING SESSION

2.1 Preparing the hardware and room

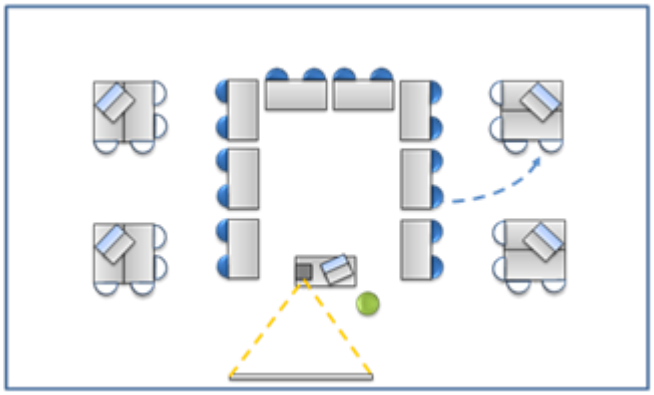
Here are several suggestions for the installation:

- You can use laptop or desktop PCs to run the simulation. It is essential that every member of a team can see all the details on the screen of at least 15".
- Check that the sound volume of the computer is set to the maximum and switch to “Full screen” mode.
- It’s recommended to use a projector for the presentation of SimulTrain®.
- Tables for a group of four persons can be 160 x 160 cm (that's two standard tables of 80 x 160 cm put together).
- Here you will find suggestions of how to set up the tables in the room for a training session for sixteen participants:

Option A
(~ 80 m^2)



Option B
(~ 100 m^2)



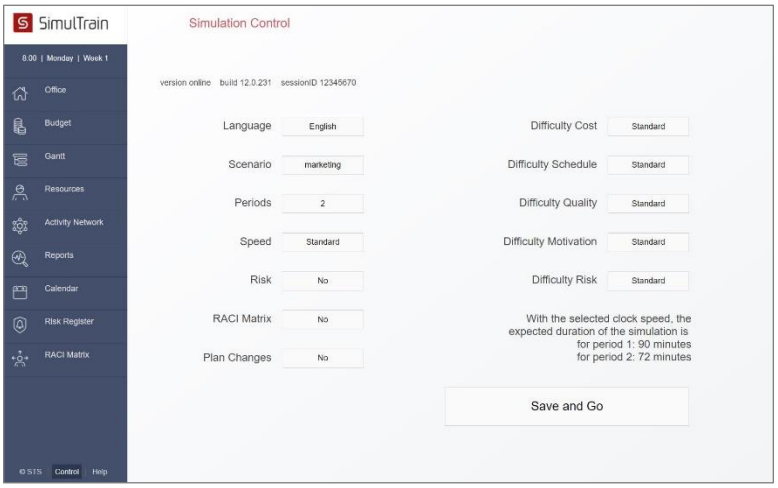
2.1 Forming teams

- There must be balanced teams of 3-4 participants. Avoid putting all the experienced people together on one team.
- Allocate roles to the team members: one will be responsible for cost, one for schedule, one for quality, and one for motivation.

3 LAUNCHING THE SOFTWARE

3.1 Simulation Control

The trainer can set the configuration at the first launch of the simulation or via the Trainer Desk. After the first launch, you access the "**Simulation Control**" screen. Here you can choose:



- the **language**,
- the **scenario**, and
- the **duration** (2 or 3 Periods):
  - Option with 2 periods: Simulation with ONE break at the end of week 4. Period 2 (weeks 5 - 12) runs at an *accelerated speed*.
  - Option with 3 periods: Simulation with TWO breaks at the end of week 4 and week 8.

The duration of the project is 12 weeks at maximim for all versions.

You can also determine the **simulation clock speed.** In case of doubt, we recommend keeping it on "Standard."
The table below shows the duration of the simulation periods:

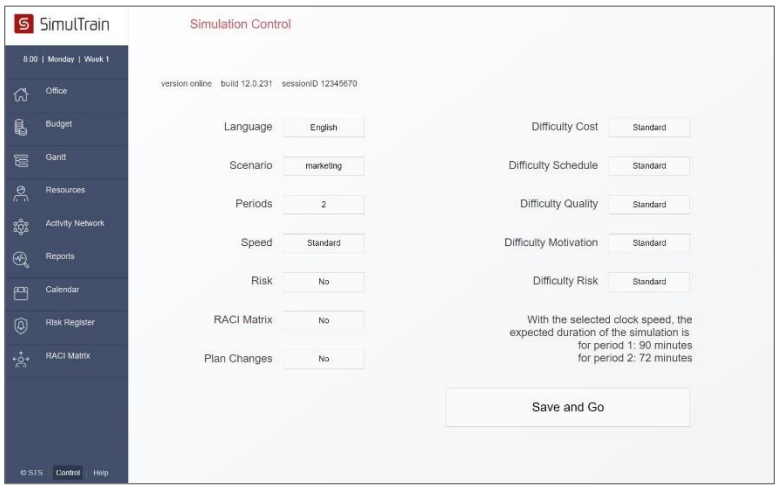
Speed	Duration Period 1	Duration Period 2 or 3
Slow 3	120'	96'
Slow 2	110'	88'
Slow 1	100'	80'
Standard	**90'**	**72'**
Fast 1	80'	64'
Fast 2	70'	56'
Fast 3	60'	48'
Fast 4	24’	19’
Demo	50'	40'
Test	6'	4'

It’s recommended to use

- **Standard** speed for the normal training session, and
- **Demo** speed for presenting the product to participants.

3.2 Settings

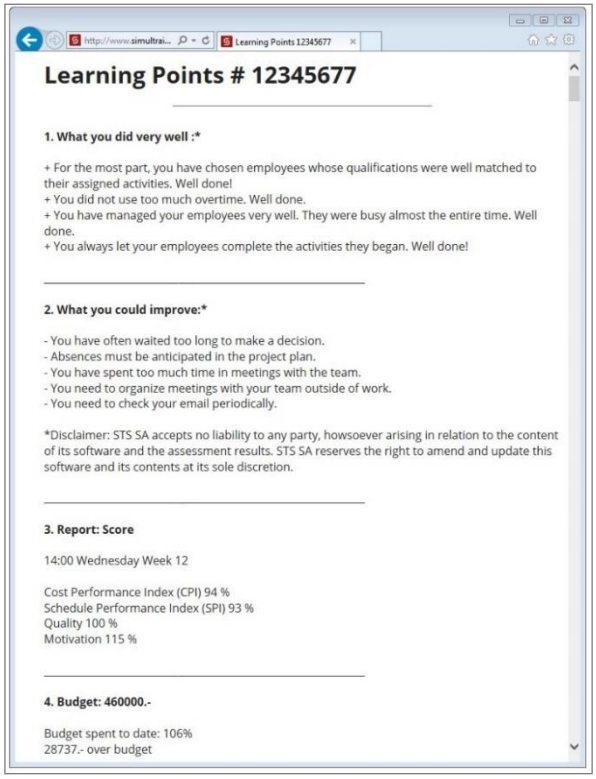
Difficulty Level



You can change the standard level of **difficulty** for:

- **Budget:**
  - easy level : total budget is 10% higher than the standard
  - hard level : total budget is 10% smaller than the standard
- **Schedule:**
  - easy level : productivity is 10% better than the standard
  - hard level : productivity is 10% worse than the standard
- **Quality:**
  - easy level : the error rate is 10% lower than the standard
  - hard level : the error rate is 10% higher than the standard
- **Motivation:**
  - easy level : all positive effects on motivation are 10% higher
  - hard level : all negative effects on motivation are 10% higher
- **Risk:**
  - easy level : the probability of risk occurring is 10% smaller
  - hard level : the probability of risk occurring is 10% higher

“Learning Points”

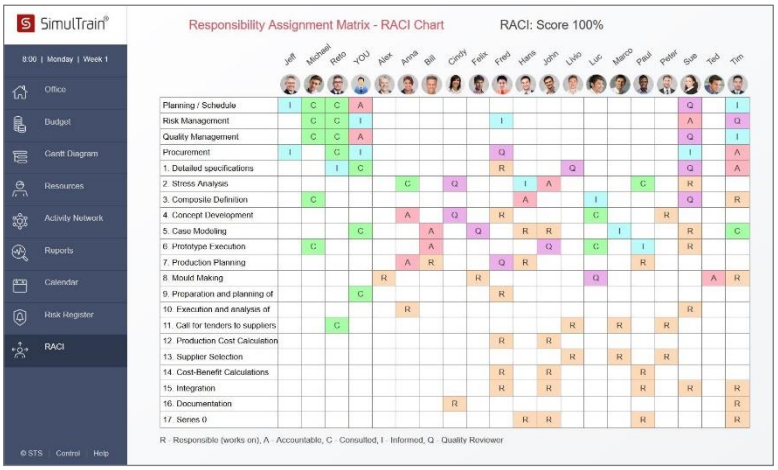


Once the simulation is over, an additional report is available in the "Reports" menu or via direct link https://www.simultrain.swiss/smt12/logfile/lp/11111111.html (replace 11111111 by the real password).

The report "Learning Points" shows the team’s strong and weak areas and helps the participants to discover the areas where they need to improve their competency. The participants can analyze it in detail after the session.

It includes the following chapters: “What you did very well”, “Personal Competences” “What you could improve”, and issues that can be called up such as “Score”, ”Budget: Material”, “Risk Register” , “The following decisions increased team motivation” , “The following decisions decreased team motivation”, “You made the following decisions”, and “Jeff made some decisions that you did not make”.

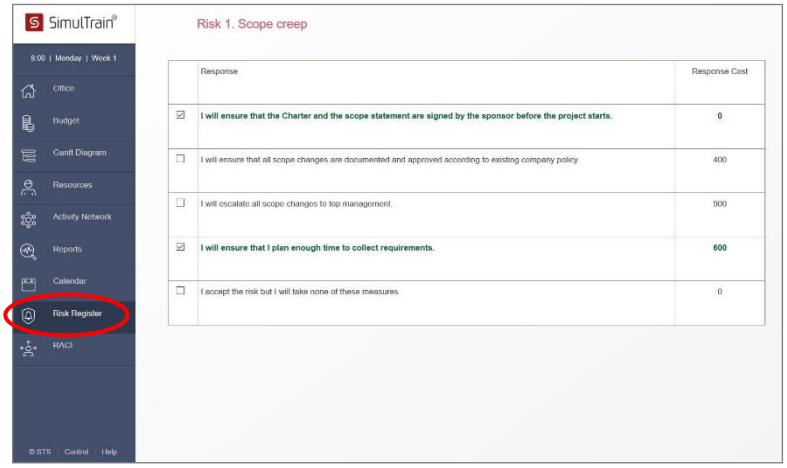
RACI Chart



If you activate “RACI Chart” in the “Simulation Control”, a new report is available in the left menu. If you choose it, you need to plan at least ***30 minutes*** more time for the planning. The assignment in the chart can be made during planning and executing. You distribute a 1-page additional document “Doc 123 RACI Chart” that is available at STS Partner Portal. Participants plan who will be Responsible (works on the activity), Accountable, Consulted, Informed, and Quality Reviewer. Once the activity is completed, they cannot change the role. The good practice includes assingning one Accountable, at leat one Responsible, one Quality Reviewer, to inform and consult people involved in the activity. Based on these criteria, the productivity, motivation, and error rate can change ±10%. Participants see PMO feedback via emails and the explanations at the Motivation Chart.

Risk Management

If you select “Risk Management” in the “Simulation Control”, participants have to analyze the risks listed in the Risk Register and plan risk responses. For this, you need to plan at least ***20 minutes*** more time for the planning and ***10 additional minutes*** for the final debriefing. There are 7 risk items at the beginning, 8 risk items are added during the simulation. They periodically visit the Risk Register, at least once at the beginning of every week.



The Risk Register includes four steps:

- Identify,
- Analyze,
- Plan Risk Responses, and
- Monitor and Control.

Participants make decisions in the chapter “Plan Response”. They have limited time to plan a response to the risks. Careful: if they don’t react **within 4 days** of the risk appearing in the register, they are no longer able to plan the response. An additional risk reserve of 40000 is available for risk responses and risk impact coverage in the project budget. The responses to risk have a direct **impact on the risk reserve budget and duration of the project**.

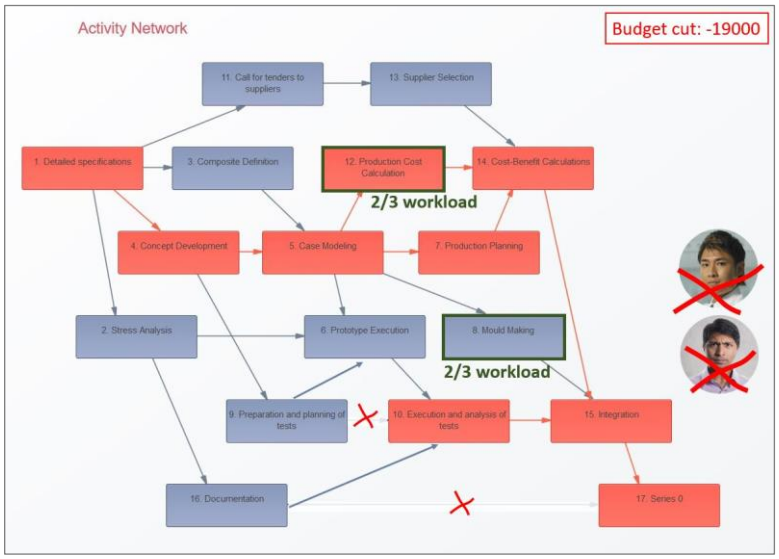
Risk Management Index (%) is an empirical indicator that shows whether the project risks are being properly managed or not. It can be higher or below 100%. It includes three parts:

- Does the manager react to risks? If he/she misses the 4-day period to react to a risk, RMI decreases.
- Does the manager choose the best response(s) to a risk? If the manager misses a good response or exaggerates with responses, the indicator decreases.
- Is the forecast risk reserve spending below 40’000? If so, the indicator increases.

Attention: the indicator on the office screen shows the Risk Management Index and not the project risk probability.

Plan Changes

If you activate “Plan Changes” in the “Advanced Settings”, changes are made to the project plan after weeks 4 and 8. These changes demand re-planning at the beginning of the second period, so that participants can still successfully finish the project on time and within budget. You need to schedule ***15 minutes*** more for planning of the second period compared with a standard project.



When the first period has finished, participants receive mails about several changes:

- The scopes of activity 8 and 12 have been reduced by 1/3,
- The project budget has been cut by 19'000,
- Activity 9 has to be finished before activity 6 starts,
- Activity 16 has to be finished before activity 10 starts, and
- Felix and Livio are no longer available for the project.

When the week 8 has finished, participants receive mails about several changes:

- The scope of the last activity has been reduced by 25% ;
- Activity 10 has to be finished before activity 17 starts, not activity 15.

Pause / Resume

On the page ***Simulation Control / Advanced Settings***, the trainer can pause the execution phase during the simulation and save the logfile if a back-up is needed. By klicking ***Resume Executing*** the trainer can resume the simulation subsequently.

Resource Leveling Chart

Resource Chart shows a histogram of people in the core team, people available and the number of active people. It is optional and available at the bottom of the Resource chart. This is the additional information on resource use.

The simulation can be set for different categories of users. STS recommends the following settings:

Category	Students	General Audience	Project Participants	Project Managers	Project Sponsors
Duration, hours	4 + 3 + 3	3 + 2	3 + 3	4 + 2	3 + 2
Speed	Standard	Slow	Slow	Standard	Fast
Scenario	Ecom	Event	Product	Ecom	Reorganization
Periods	3 periods	2 periods	2 periods	2 periods	2 periods
Risk Management	-	-	Yes	Yes	-
RACI Chart	-	Yes	-	Yes	Yes
Plan Changes	Yes	-	Yes	Yes	Yes
Dificulty	-	-	-	Yes	Yes

4 PRESENTING SIMULTRAIN® TO THE PARTICIPANTS

Before the participants begin using the simulator, the trainer makes a twenty-minute demonstration. You will find guidelines for making this presentation in the document Doc 7017.

This presentation will preferably be made with your notebook, which you will have connected to a projector. In order for the introduction to the simulation to proceed quickly, it's recommended that you adjust the clock speed in the "Simulation Control" to "**Demo**" speed (*For more detail, refer to chapter 2.3)*.

4.1 Explaining the planning phase:

- Explain that there is, first, a planning phase. During this period, the simulation clock is stopped and all commands can be cancelled.
- Thereafter, there is the execution phase in which the clock is ticking. Any decisions taken in this period cannot be changed anymore.
- Present the reports: Organization Chart, Project Description, Activity Network, and Gantt.

- Present an activity and the skills required for its realization.
- Present an employee: show his/her profile description, skill rating, hourly rate, and availability for the project.
- Explain the concept of the core-team (Fred, Sue and Tim). These three persons are on payroll, i.e. they are paid throughout the project. Other persons are only paid by the project if they do certain activities.
- Allocate a few activities: for example, allocate activity 1 to Fred, Sue and Tim.
- Explain that you can choose the number of people you want to allocate to each activity. The indicated number ("Planned number of people") is the optimal number, not mandatory.
- Explain that the main task in the planning stage is to allocate employees to the project activities according to their availability, and their skills.

4.2 Showing the execution phase:

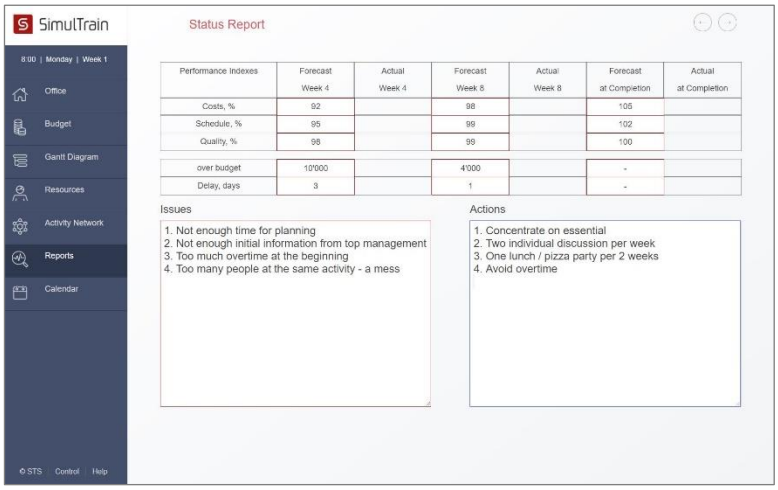
- Click on "Control" (see chapter 8.2 How do you start the clock (execution phase)?) and launch the simulation (“Start Executing”). Show how the simulated hours pass by.
- Explain that the assistant brings documents. Click on them and show the decisions to be made and the possible options.
- Make sure that participants understand that each of their decisions will have pertinent effects on all parameters of the project. Once a decision is taken it cannot be changed.
- Explain how participants can get feedback on their decisions (e.g., by clicking on the motivation report).
- Explain that the four indicators in the Office are performance indexes: Cost Performance Index (CPI), Schedule Performance Index (SPI), Quality Index, and Motivation Index. The higher the indexes, the better the project is managed. Show people that they can click on the curve and receive an explanation of why it has changed.
- Let the audience listen to the first phone call.
- Present the reports: Dashboard, Resources Diagram, Budget, and Quality.

4.3 Giving clear instructions about the session schedule:

- There are 60 minutes to complete the planning, during which participants must allocate resources and plan events in the Calendar.
- After that, the clock will be started and participants will “manage” the project over four weeks (90 minutes non-stop).
- There is a debriefing after the execution phase.

4.4 Status Report

Trainer can ask participants to fill and save the Status Report. The report is available for editing at the beginning of the game. The participants are able to modify the forecast for following 4 weeks during the first week. The participants describe issues and plan action to avoid them in the future. They also give forecast for performance indexes for four-week periods and the end of the project. The trainer can access to the report via TrainerDesk for online version. Report of project status is an important part of the role play during the debriefings. Filling of the form is optional and it does not affect the simulation.



5 PERIOD 1

5.1 Planning

Explain to each team:

- Resources diagram shows the availability of the resources for the project.
- How to assign and cancel overtime on the pages of team members.

Here are the answers to frequently asked questions:

- In matrix organizations, it's better to reserve people in advance, because otherwise they might be taken by other project managers.
- It isn't necessary for everybody working on a given activity to have the required skills. One person having the necessary skills is acceptable (though, of course, it is ideal if all hired persons have all the required qualifications).
- The number of people working on an activity affects the duration of the activity. The mentioned number is an initially planned number; the participants can put more people on any activity. Of course, that will be a mess and people will work slowly. That might decrease the productivity.
- Only six activities at a time can be allocated to each employee. However, once the simulation has begun, activities will disappear from the allocation list as they are completed, making space for new allocations.
- People refuse to work on an activity if they has none of the skills that are the same or higher that the skills required.

5.2 Execution

- At the beginning of week 2 tell the participants that it's recommended to plan for a reasonable number of Quality Reviews (one review for every 40 hours of work) at the end of every activity, because late error correction takes much more time.
- Explain how quality issues appear (For more detail, refer to chapter 8.8 How do you manage Quality during the simulation?).
- Explain that the project manager should talk with employees every week, at least with 1-2 people.. The participants can schedule discussions with team members in the Calendar.

5.3 Debriefing

Procedure: team reports

- Write down the results from each group (schedule, cost, quality, motivation).
- Ask them to note their major mistakes.
- Ask the teams to prepare a status report.
- Let the groups present their results, explaining, if necessary, why they are "over budget" or why the project is late. Play the role of Jeff, to whom the Project Manager makes an intermediate report. Analyze how to better report the project's performance to top management.
- As regards a core-team's idle working hours, insist on the fact that, in real life, people won't tell you that they have nothing to do – they will just organize their personal belongings, etc.
- Explain that, at the beginning of the project, meetings should take up about 10% of working time (half a day per week).
- Have them set ambitious objectives for the next period.

Decision analysis

It won't always be possible to discuss all the decisions. Below you will find a list of those decisions that give rise to the most fruitful discussions:

- Kick-off meeting
- Choosing the computers
- Project management software
- Priorities
- Sue: Working at home
- Jeff: Offices in Six Roads Crossings
- Reto needs Sue
- Customer: Delivery two weeks later

6 PERIOD 2

6.1 Planning

- Ask participants to plan resources according to the available budget (report “Budget”).
- Make sure enough quality reviews are planned (recommended: one quality review for every 40 hours of work completed).

6.2 Execution

Here are the answers to frequently asked questions:

- The members of the core team must be occupied.
- A good project manager should talk with each project team member once a week.

Flu epidemic

There is a flu epidemic. Observe the behavior of the teams and note panic, quick decisions, or nervousness. This will provide good material for discussion during the debriefing.

Breakdown of the server

At the beginning of the sixth week, the company's server breaks down. As a result, the three graphs (Gantt diagram, Resources, Activity network) can't be consulted anymore. The breakdown lasts one day, but don't tell this to the participants! Let them manage the project while able to access only partial project information.

When a team uses 2-period version and reaches the end of the project

- Organize a small party (glass of wine, etc.).
- Congratulate the participants personally; shake hands.

6.3 Debriefing

Procedure: team reports

- Write down the results from each group (schedule, cost, quality, motivation).
- Ask teams where they made mistakes.
- Ask teams whether it ever happened that the core-team members had nothing to do.
- Each team presents their results and explains how things happened.
- You can play the role of Jeff, to whom the Project Manager presents the report.
- If you are running the 2 PERIODS version, at the end, show the participants the new reports, “Key Indicators” and “Learning Points.”

Analysis of flu epidemic

- Participant's reaction to the flu epidemic can be a theme of its own. General idea: in a stressful situation, every quick decision is wrong. Cooling down and discussing things with every member of the project team is preferable.
- Point out that a certain reserve of human resources is necessary.

Decisions

Here are the decisions that we recommend discussing with the participants:

- Jeff: Trip to Asia
- Training course
- New software tool

7 PERIOD 3

The following explanation are only valid if you use the version 3 PERIODS.

7.1 Planning

- The participants usually don't have any questions during the third planning period.
- Insist, once again, that reserves are necessary: an extra 15% of human resources need to be planned in advance for unforeseen absences (illness, accidents, etc.).

7.2 Execution

When a team reaches the end

- Organize a small party (glass of wine, etc.).
- Congratulate the participants personally; shake hands.

7.3 Debriefing

Procedure: team reports

- Write down the results from each group.
- Ask them about their mistakes.
- When they finish analyzing their mistakes, show the new report, “Learning Points”.
- Each team presents their results and explains how things went, and, if necessary, why they couldn't keep to the budget or why there were delays.
- You may assume the role of Jeff, to which the project manager present the status report.

Decisions

Here are the decisions that we recommend discussing with the participants:

- Fred complains about Tim
- Rachel: Discussing assessments
- Bonuses for the team

8 FREQUENTLY ASKED QUESTIONS

8.1 How do you resume a simulation after closing the application?

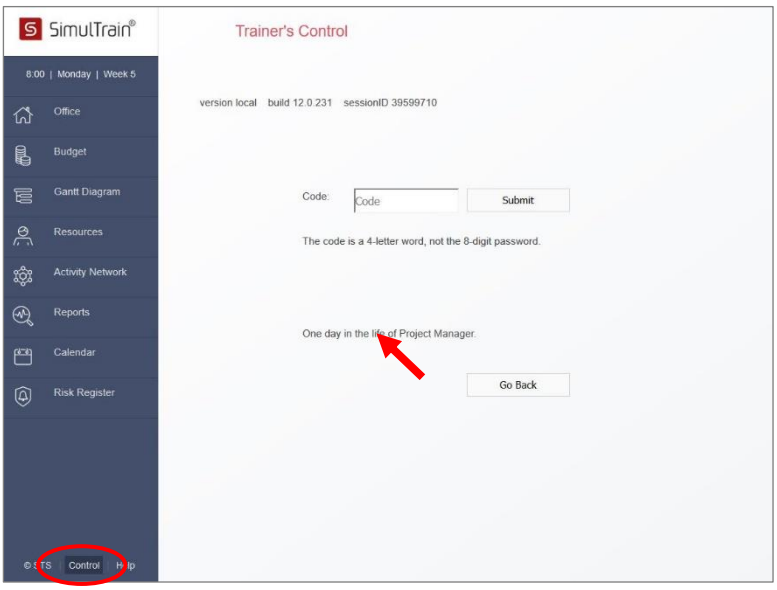
Login again with the password you received from STS.

SimulTrain® will then replay through the simulation very quickly, until it reaches the point where it was interrupted. You can continue from there.

8.2 How do you start the clock (execution phase)?

Please click on the "**Control**" icon:

Enter the code «**life**» in the "**Code**" field, or simply click on the word «**life**» in the middle of the screen:



This allows the trainer to once again access the "**Simulation control**" screen. In order to launch the execution phase, click on the button "**Start Clock.**"

You will now find yourself in the project manager's office; the execution has started and time is running. After four weeks of project execution, the clock will stop automatically and the participants can analyze what has happened and prepare their reports.

8.3 How is the simulation saved?

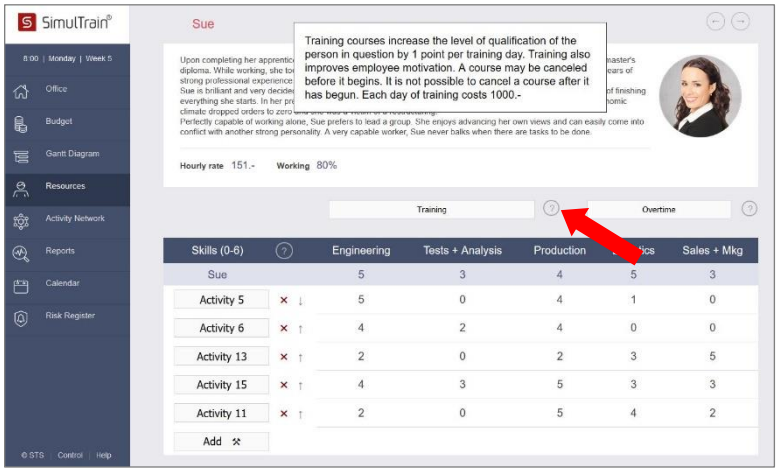
It's simple: during the course of each simulation, a file is automatically created. It contains all the commands entered during the simulation. This is the file that is used when you wish to resume a previously interrupted simulation.

8.4 How do you change the duration of the execution phase?

In the "**Simulation Control**" screen, you can specify the speed of the simulation, choosing gradations between "Slow 3" (for the slowest speed) and "Fast 3" (for the quickest speed). The estimated duration time for the simulation is presented here.

8.5 Is there a HELP button?

1. There is a “Help” button at the top right corner of the window.
2. Clicking on the icon “**?**” on certain screens provides the users with relevant explanation.



8.6 What are the reasons for higher costs?

- Idle resources
- Mismatch between the required skills and actual skills of the resources (individual and for the team)
- Bad decisions decrease motivation / productivity / efficiency
- Too many resources assigned to an activity (for example, 4 assigned people where 2 people were originally planned)
- No quality reviews / no project reviews. Poor quality increases the costs of correcting errors
- Too many meetings
- Using “expensive” people for simple tasks
- Too much overtime

8.7 What are the reasons for schedule delay?

- Resources were not booked in advance
- Resources were not assigned to an activity
- Mismatch between the required skills and actual skills of the resources (individual and for the team)

- Too many resources assigned to an activity (for example, four assigned people where two were originally planned)
- Bad decisions decrease motivation / productivity
- Poor quality leads to a higher error correction time

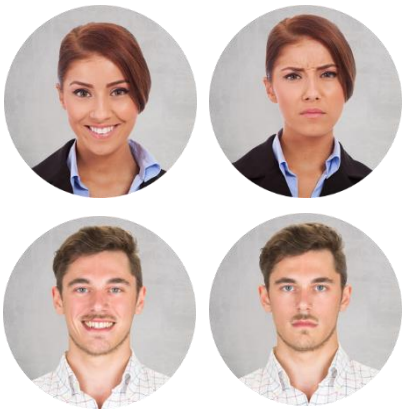
8.8 How do you manage Quality during the simulation?

Simulated people inside SimulTrain® do “make mistakes” while performing an activity. If the Project Manager organizes Quality Reviews, many of these errors are immediately corrected. When the work on an activity is finished, uncorrected errors are discovered and people who worked on the activity then correct them. However, it definitely takes more time to correct any errors after the activity completion. The correction time is shown on the Gantt chart.

It is recommended to plan a reasonable number of Quality Reviews (e.g., one review for every 40 hours of work) in the Task screen. Error corrections at a later stage take much more time. Reasons for low quality:

- Mismatch between required skills and actual skills of the resources
- People are not motivated and make too many errors
- Too many resources assigned to an activity
- There are no quality reviews
- No qualified resources available at the “last minute”

8.9 Why can motivation be low?

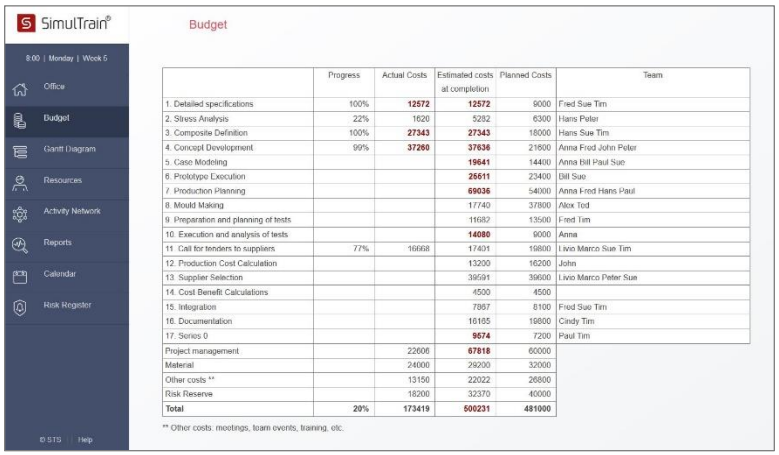


- Lack of qualification
- Too many people assigned to a single activity
- No decisions in favor of the team
- No face-to-face discussions with employees
- No team meetings
- No training sessions
- Too much overtime
- Frequent switching of people from one activity to another

Pictures of people depend on their motivation.

8.10 What do the terms mean?

Budget Report



	Progress	Actual Costs	Estimated costs at completion	Planned Costs	Team
1. Detailed specifications	100%	12572	12572	9000	Fred Sue Tim
2. Stress Analysis	22%	1620	5282	6300	Hans Peter
3. Composite Definition	100%	27343	27343	18000	Hans Sue Tim
4. Concept Development	99%	37260	37636	21600	Anna Fred John Peter
5. Case Modeling			19641	14400	Anna Bill Paul Sue
6. Prototype Execution			25511	23400	Bill Sue
7. Production Planning			69036	54000	Anna Fred Hans Paul
8. Mould Making			11740	37800	Alex Ted
9. Preparation and planning of tests			11682	13500	Fred Tim
10. Execution and analysis of tests			14080	9000	Anna
11. Call for tenders to suppliers	77%	16668	17401	19800	Livio Marco Sue Tim
12. Production Cost Calculation			13200	16200	John
13. Supplier Selection			39591	39600	Livio Marco Peter Sue
14. Cost Benefit Calculations			4500	4500	
15. Integration			7857	8100	Fred Sue Tim
16. Documentation			16165	19800	Cindy Tim
17. Series 0			9674	7200	Paul Tim
Project management		22606	67818	60000	
Material		24000	29200	32000	
Other costs **		13150	22022	26800	
Risk Reserve		18200	32370	40000	
Total	**20%**	**173419**	**500231**	**481000**	

** Other costs: meetings, team events, training, etc.

(is called up by clicking on the “Budget”-icon on the left navigation bar)

Progress (%): percentage of activity completion. 100% means that the activity has been completed and that all its errors have been corrected.

Actual Costs (monetary value): Costs incurred to date.

Estimated costs at completion (monetary value): forecast of the costs when the activity (or project) is completed.

Planned Costs (monetary value): Initially planned costs of every activity and the project.

Project Management (Project Manager’s cost): budget assigned to the manager. You are exactly on budget if you finish the project in 11 weeks.You spend more on the project manager if the project duration is longer than 11 weeks. It is proportional to the project duration.

Material (monetary value): budget assigned to the purchase of special equipment for the project, such as computers and software.

Other Costs (monetary value): cost of people’s time during meetings, cost of social gatherings, and cost of training courses.

Risk Reserve (monetary value): see Risk Management

Gantt Chart

Critical Path There are 2 concepts of critical path presentation:

1) Classical (not included the availability of people): The critical path always exists from the first to the last activity. All activities that can delay the end of the project are critical.
2) With resource availability: The critical path also depends on the availability (or absence due to holidays, working on other projects, or given priorities) of the people. The last activity is always critical. All activities that are delayed by 1 day and delay the end of the project are critical. In this case the critical path is not necessary from the first to the last activity. The algorithm of the software checks each of the project activities and decides if it is critical or not.

SimulTrain uses the second approach because we always use the availability during the simulation and not a hypothetic theoretically-correct project. Both diagram Gantt chart and Resource availability must considered together to analyse the critical path.

If the critical path does not start with the first activity, then the software informs about the activity and the person that delay the project. The project manager may intervene and change the people on the activity or the priority for the critical person.

Dashboard

(to be found in menu “Reports”)

Cost Performance Index (CPI, %): It is the ratio of current earned value to actual costs. 100% or greater is OK. The indicator is red if it is less than 90%, green if it is greater or equal to 100%.

Schedule Performance Index (SPI, %): It is the ratio of current earned value to planned value. 100% or greater is OK.

Quality (Quality Index, %): an empirical index reflecting the number of errors. 100% is OK.

Motivation (Motivation Index, %): an empirical index reflecting the team’s motivation based on the decisions taken during the simulation. 100% or greater is good.

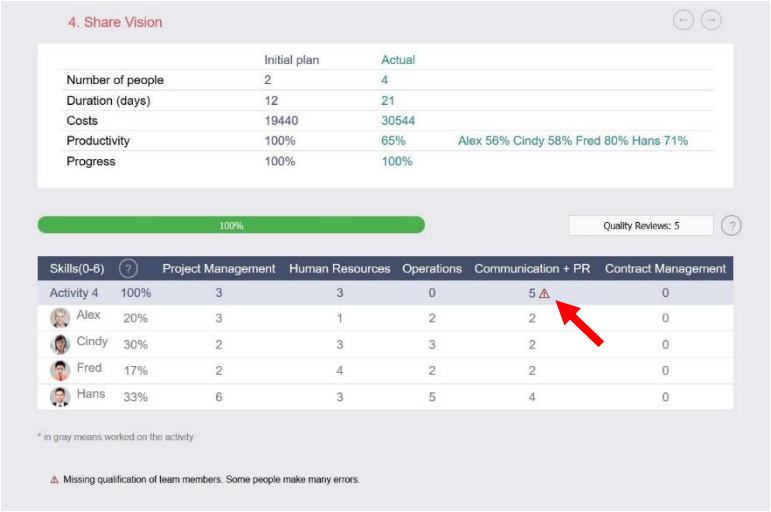
Hours invested (hours): total number of hours invested up to today.

Idle hours: number of hours when the core team members did not work. The reasons might include lack of assignments or waiting for the end of the previous activity.

Overtime (hours): the number of hours of overtime worked in the evenings up to today.

Hours of sick leave (hours): the number of sick leave hours up to today.

Hours spent in training (hours): training hours up to today. A day of training costs 1000.-
Training courses increase the level of qualification of the person in question by 1 point per training day.



Productivity (%) is the ratio of planned time to the invested time. 100% or greater is OK. The productivity on a project activity depends on team motivation, team size, individual skill matching of each participants and the team skill matching. The team skills are defined by maximum values for each categories. If one of the team skills is missing (a special sign appears), then the activity can be still executed, however the productivity can be low and the greater number of errors is usually generated.

Budget spent to date (%): this is the actual cost and includes the cost of core team member’s time, other people when they worked on the project, materials, meetings, and social gatherings.

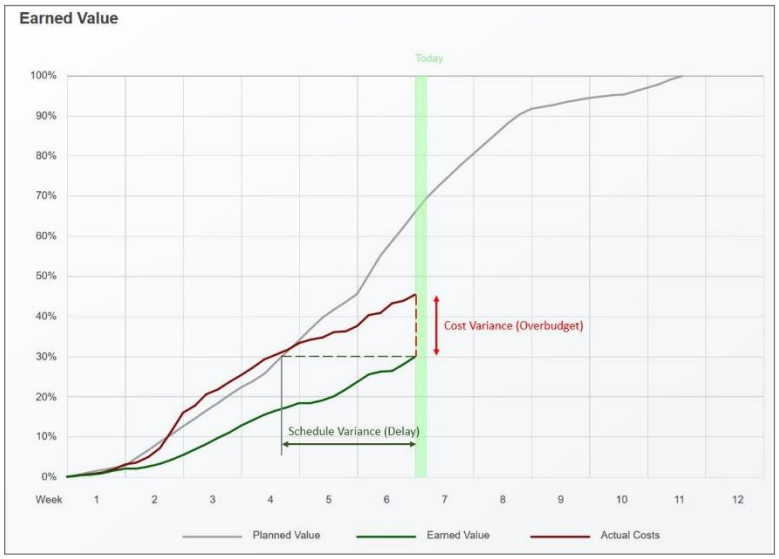
Percentage completed (%): the percentage of work completed up to today.

Quality Reviews: the number of quality reviews up to the present date. The objective of the quality reviews is to verify the quality of the project activities and correct small errors.

Time spent on error prevention (hours): hours spent by team members in quality reviews up to the present date.

Time spent on error correction (hours): hours spent on error correction at the end of every activity.

Earned Value Chart shows Earned Value and Planned Value. The chart changes if there are changes in the project plan. Planned Value beyond the duration of project increases proportionally to the date.



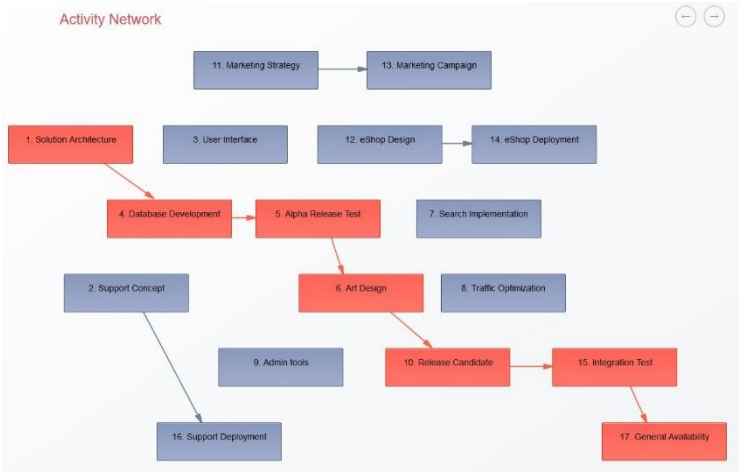
9 SIMULATION SCENARIO

9.1 Project Scenarios

e-com	An IT/marketing project to create interactive online services which allow the customers to follow-up and control orders.
e-com / People	A scenario similar to e-com. It differs by skipping technical decisions and using RACI chart.
e-com / Risk	A scenario similar to e-com. It differs by skiping soft skill decisions and concentrating on Risk Management.
Event	An event project to prepare an international football tournament preparing all stages until the opening day.
Marketing	A marketing project to launch a new, all-in-one smartphone to the market.
Product	A development project to find an appropriate solution for the case of an ultra-miniature pacemaker.
Reorganization	An organizational project to redesign the company's organization to address the new market challenges and to respond quicker to clients' needs.
Oil & Gas	A construction project to purchase and install new machinery parts of a refinery.

The mentioned scenarios are similar. About 70% of the decisions are general project management related questions; only about 30% of the questions are related to the scenarios. Completely different scenarios are Strategic Project Management (multiproject portfolio management, https://simultrain.swiss/plus/) and the agile scenario (page 22).

9.2 Scenario “Agile Hybrid”

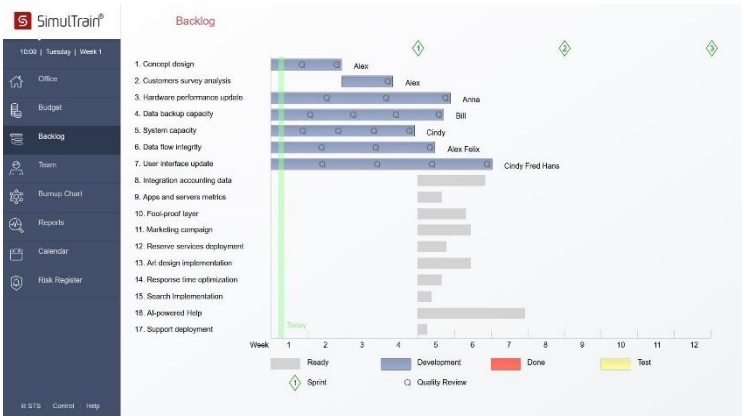


The agile hybrid scenario is typical for the development projects that includes elements of traditional and agile development. It differs from traditional project management because it has fewer activity dependences and a more flexible team. It’s recommended to use 3-period version. **Please refer to the doc 495 “Using Agile Scenario” for detailed instructions.**

The technical differences compared with other scenarios are as follows:

- The number of dependencies is smaller: many activities can be started immediately. The project ends when all activities are done. Participants can finish the project faster than they can using another scenario.
- The calendar of the project manager includes sprint planning and review meetings.

9.3 Scenario “Agile”



The agile scenario is typical for the fast software development projects. The trainees play roles of the members of the development team. In the planning phase they choose the team of **7 people** and features to be developed in each of **3 sprints** with the total number of **story points - 300**. The duration of sprint is usually 1-4 weeks. The duration of sprint in this simulation is 4 weeks.

The recommended settings of the simulation are: scenario: ***agile,*** *speed:* ***fast 3,*** *risk:* ***yes,*** *plan changes:* ***yes*****.** Other features depend on your choice and they are less important.

Please refer to the doc 477 “SimulTrain 12 Agile User Guide” for detailed instructions.

https://www.simultrain.swiss/doc/477_EN_User_manual_SimulTrain_Agile.pdf