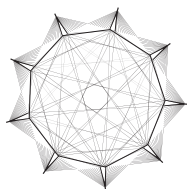


Bonds & Bridges

*Facing the Challenges of the Globalizing World
with the Use of Simulation and Gaming*



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Bonds & Bridges

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DEVELOPMENT OF PERSONAL LEADERSHIP THROUGH SIMULATIONS

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ABSTRACT

We believe simulation games are an effective instrument for leadership development and in this article we describe the design, development and implementation process of one of our latest simulation games, specifically developed and used for leadership development – the Leadership Factory. The Leadership Factory is a custom built simulation game in which participants experience the effectiveness of their leadership. The main purpose of this game is to create a safe learning environment where participants can demonstrate, practice, test, and improve their leadership competences. The game is an integral part of the leadership development program and has an aim of integrating all learning elements of the program in a one day experience. Based on this experience the participants, as a result, are expected to define their personal leadership development points.

1. INTRODUCTION

Today, organizations face greater challenges than ever. They must operate through periods of unprecedented complexity and change driven by challenges from the external environment, such as a changing political landscape, fierce competition for talent, workforce demographics, con-

sumer preferences, and shifting centers of economic power and activity. These challenges have prompted a wide variety of organizations to recognize that they need a cadre of effective leaders who are able to respond to these challenges.

Once regarded as a luxury reserved for top executives, leadership capability development efforts can create a stronger talent pool across all levels of management. By doing this, organizations can achieve not only their intended results in the short-term but sustain performance in the long-term.

In his book *Crucibles of Leadership*, Robert J. Thomas (2008) describes that great leaders are distinguished from average leaders by their ability to learn from experience. He calls the most fertile experiences “crucibles” – times of trial and testing that lead to failure as often as they produce success. Crucibles are described as transformative experiences that force aspiring leaders to examine who they are, what matters to them most, and what they can learn from success and failure. These crucibles teach lessons both about leading and about the process of learning.

Accenture’s research at the Institute for High Performance Business (Thomas, 2008) has demonstrated not only that experience is the best teacher of leadership and practice can trump talent, but also that great leaders are distinguished from good ones by their own Personal Learning Strategy – something anyone can devise.

We believe simulation games are an effective instrument for leadership development, because they provide participants a safe setting to:

1. Experience the effectiveness of their leadership;
2. Practice their leadership behavior; and
3. Reflect on the effectiveness of their behavior in order to develop personal development points that can be incorporated in their own Personal Learning Strategies.

In this article we describe one of our latest simulation games specifically developed and used for leadership development – the Leadership Factory.

2. CASE: THE LEADERSHIP FACTORY

Our assignment was to design, develop and implement a leadership simulation game as part of an existing leadership development program. More specifically, the leadership simulation needed to be:

- A. Designed in a way it:
 - Can be used as an instrument for leadership development;
 - Provides a safe setting in which participants can demonstrate, practice, improve and test their leadership behavior;

- Addresses the 8 leadership competences defined by the client's leadership model;
 - Enables structural feedback on leadership effectiveness; and
 - Enables the transfer of learning into personal development points.
- B. Developed in a way it:
- Hosts between 8 and 12 participants per session;
 - Can be frequently used with the same materials; and
 - Has a short preparation time.
- C. Implemented in a way it:
- Is integrated in the existing leadership program;
 - Is a full-day exercise at the end of the program; and
 - Is facilitated by the client's leadership trainers who have no extensive experience in facilitating simulation games.

These requirements ask for a structured game design approach in order to ensure client's expectations will be met within the given timeframe. Therefore we have applied the five step design process of Wenzler (1997), a design process we always use when developing a game, simulation, policy exercise or any other type of what we generally call a 'simulated reality' intervention (Figure 1).

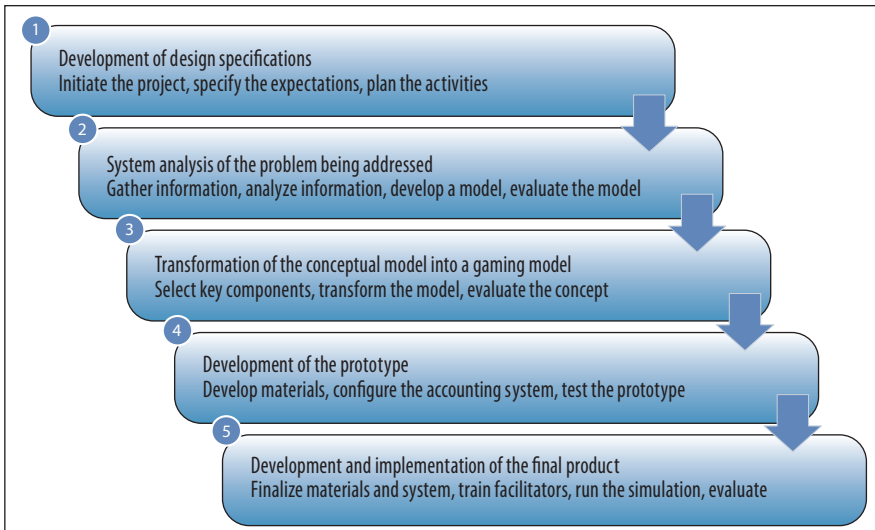


Figure 1. Five step game design process of Wenzler (1997)

3. DEVELOPMENT OF DESIGN SPECIFICATIONS (STEP 1)

In the specifications phase we helped our client first to define and then to commit to the basic framework for design, implementation, and evaluation of the proposed simulation game.

During a workshop we discussed a whole range of questions, from the nature of the problem to the ownership of the final product. The specifications are presented along the game dimensions of Wenzler (Figure 2). Wenzler has developed these dimensions as a guide to simulation game development and to describe the elements that make a game work as intended (Wenzler, 2008). Each simulation game has four basic components, each of which is further comprised of four different dimensions.

















Simulation components	Simulation dimensions	Range of characteristics (mutations) for each dimension
A. Context	Problem	understood ←  → ambiguous
	Objective	knowledge transfer ←  → knowledge creation
	Model	qualitative ←  → quantitative
	Story	reality based ←  → metaphor based
B. Players	Target	single individual ←  → multiple groups
	Level	operational ←  → executive
	Roles	own (real-life) ←  → somebody else's (assumed)
	Culture	homogeneous ←  → heterogeneous
C. Process	Sequence	real time ←  → concentrated
	Interaction	directive ←  → self organizing
	Steps	sequential ←  → iterative
	Indicators	qualitative ←  → quantitative
D. Environment	Location	single ←  → multiple
	Place	physical ←  → virtual (IT-based)
	Material	static ←  → evolving (transformable)
	Representation	realistic ←  → symbolic
		less complex ← → more complex

Figure 2. Simulation game components and dimensions

Context

- The problem (issue) or opportunity we were confronted with was to design a simulation game that has a good fit with the existing leadership development program;
- The objectives to be achieved were to create a safe environment for learning where participants can demonstrate, practice, test, and improve their leadership competences;
- The qualitative model of the reality that was to be simulated should consist of the 8 leadership competences defined by the client; and
- The story line and events driving the dynamics of the simulation game were to be recognizable for all participants, and because these participants are from different background the story should be metaphor based.

Players

- The intended number of target participants is between 8 and 12 participants per session;

- The players are coming from an operational level in the organization;
- The character of roles, their objectives, responsibilities, and decisions are different from their real-live roles and the game roles can be played by any participant; and
- The character of individual and organizational cultures of players is pragmatic.

Process

- The sequence in which the time will be treated during the simulation game run is real-time;
- The type of interaction between players within the simulation game should be self-organizing, the options players have are dependent on each other's decisions; and the players should experience the consequences of their actions;
- The character of role specific steps that players must follow during the run should be iterative, so the players can reflect on their experience, learn, and experiment; and
- The indicators for processing and reporting the results of players' decisions are qualitative, and the players should work together on one product that needs to function at the end of the simulation.

Environment

- The simulation game is to be run at one location;
- The place of the simulation should be in a physical world and not virtual (computer based);
- The character of materials required to run the simulation game should be easy to use and reuse; and
- The representation of the material should be realistic – at the lower level of abstraction.

4. SYSTEM ANALYSIS OF THE PROBLEM BEING ADDRESSED (STEP 2)

During the system analysis phase we analyzed the problem environment, transformed it into the organizational structure and the conceptual model, and evaluated our assumptions with our client.

The organizational structure of the organization which should serve as the basis for the game is composed of a manager, planning department and several production units that need to deliver a service or a product that meets the client's expectations (Figure 3).



Figure 3. Organizational structure and the conceptual model

The desired behavior embedded within the eight leadership competences (as defined by the client) were combined into one conceptual model comprising of four active competences:

- **Communication** – the ability to communicate ideas and information in a well-founded and intuitive way to people at different levels, while taking into account opinions of others;
- **Initiative** – the ability to be proactive, recognize opportunities; and take action to improve the organizational results;
- **Developing others** – the ability to recognize, stimulate and coach their colleagues in the development of their knowledge, skills and behaviors; and
- **Planning and organizing** – the ability to develop a plan, determine priorities, and deploy available resources to realize specified objectives and achieve expected results.

In every expression of these active competences participants are expected to find a balance between:

- **People focus** – the ability to recognize and respond appropriately to feelings and motivations of others and to be conscious about the effect of their own actions on those they are dealing with;
- **Organization focus** – the ability to recognize and understand effects of their own activities, and the activities of others, on their own organization and the environment they operate in; and
- **Result focus** – the ability to realize common objectives and long-term results.

This balance should be achieved by translating the organizational vision and its code of conduct into everything they do and by:

- **Visioning** – the ability to share a vision based on the internal and external professional developments and distinct from daily operations.

Each of these eight competences should come to expression by first analyzing the context, planning an action, performing this action, and

then checking the effect of this action on the effectiveness of their organization and the achievement of objectives.

The organizational structure and the conceptual model were the contextual basis for our design process.

5. TRANSFORMATION OF THE CONCEPTUAL MODEL INTO A GAMING MODEL (STEP 3)

During the model transformation phase we transformed the organizational structure and conceptual model into elements of the game model, and then evaluated them with our client.

In general, the game was to be interactive, the participants should be dependent on each other, and they should experience the consequences of their actions. More specifically, the transformed game elements are presented in Table 1 and 2.

Table 1. Transformation of the organizational structure


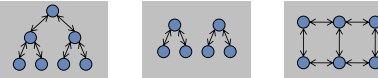

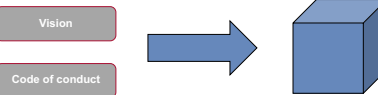


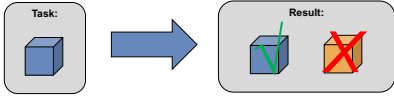


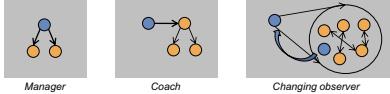
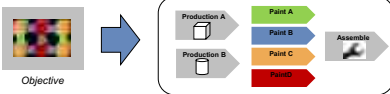
Element of the organizational structure	Visual representation
The participant should work together to make a product. The game should be easy to operate, without much preparation time and effort.	
The participants should be placed in a hierarchy. The amount of players should be between 6 and 12.	
The participants should be able to play different roles in the game. These roles need to be clear for the participants and they should be able to identify themselves with these roles.	

Table 2. Transformation of the conceptual model

Element of the conceptual model	Visual representation
The organizational vision and the code of conduct should provide guidance for the activities required for developing a desired end product.	
To enable people-focused behavior, there should be a difference in social styles of the participants.	

<p>To enable organization focused behavior, the consequences of individual actions should have an incremental effect.</p>	
<p>To enable result focused behavior, results should be testable in relation to the task.</p>	
<p>There should be different roles having different resources to enable communication.</p>	
<p>To enable initiative, a clear objective should be provided, but the roles and related tasks should not be over-specified.</p>	
<p>Participants should be able to help develop each other, approaching it from multiple perspectives.</p>	
<p>Participants should develop a plan to achieve the objective within the time given and with resources available to them.</p>	

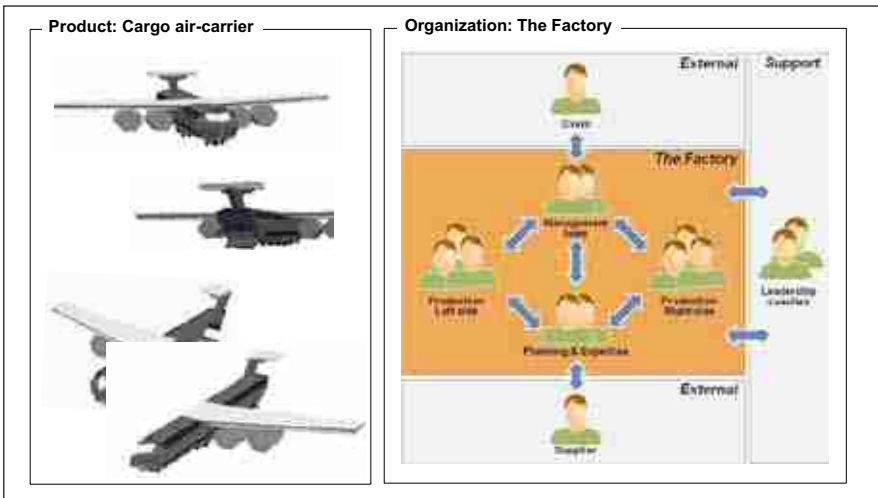


Figure 4. ‘Game on paper’ (Product – The cargo air-carrier & Organization – The factory)

After the evaluation of the individual elements we transformed them into a simulation game model and evaluated this ‘game on paper’ (Figure 4) with our client.

In workshops with the game design team and the client we came up with the idea of the Leadership Factory – a full day simulation game in which participants should act from their specific roles in an organization that builds custom cargo air-carriers for their clients. The production is done by two departments, each building one symmetric half of the cargo air-carrier. Because these departments are not able to communicate directly, the management team needs to coordinate the design and production activities effectively to ensure the product meets the client’s expectations. Besides that, a leadership development role is played by the trainers to coach the participants in their new role and make them conscious about their leadership behavior.

6. DEVELOPMENT OF THE PROTOTYPE (STEP 4)

Through a structured, iterative and creative process we developed a working prototype, including all materials of the leadership simulation.

In the Leadership Factory, the challenge should not be to design and develop the cargo air-carrier, but should come from effectively working together in a new environment, and by working under time pressure and changing client demands with people with different skills, behaviors and social styles. Participants should experience their own behavior, reflect on the effectiveness, and try to improve it during the simulation game run.

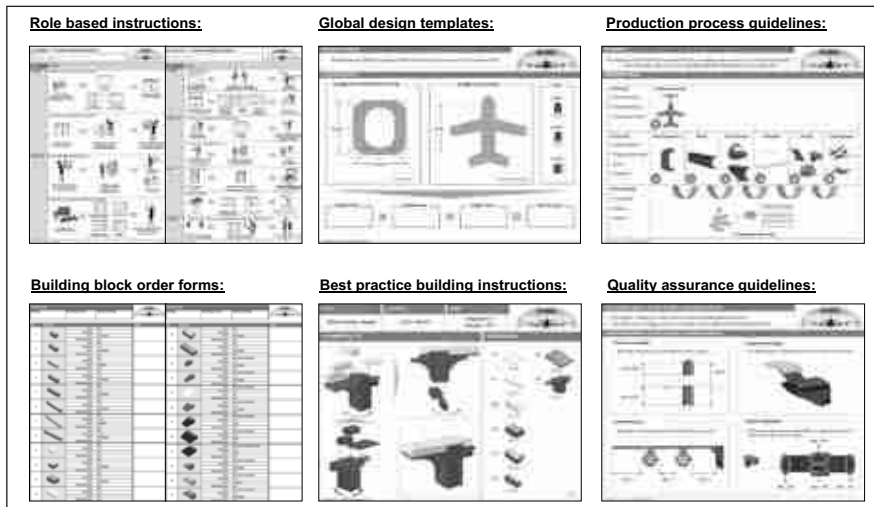


Figure 5. Examples of supportive documents for participants

With that in mind we developed design templates, building instructions, and working procedures (Figure 5) to support the participants in their new role.

We organized different sessions to test what aspects of the simulation did not work and should be improved, in order to make sure all design specifications were in place. In a final prototype test we facilitated the Leadership Factory and let client stakeholders and potential trainers play the participants roles. This test session resulted in a formal sign off of the prototype by the client and a formal go for the implementation of the Leadership Factory.

7. DEVELOPMENT AND IMPLEMENTATION OF THE FINAL PRODUCT (STEP 5)

After developing the final product we started the implementation of this simulation game by providing a highly structured training to the future facilitators, in an effort to increase their knowledge of the game and their game facilitation skills.

The biggest challenge during the implementation phase was the transfer of the Leadership Factory to the client. We needed to enable the trainers which mostly had the experience in leadership training, but not in the facilitation of simulation games, and especially not in the facilitation of a complex and full day simulation game which, additionally, they did not develop themselves.

To cope with this challenge we developed a very detailed facilitation manual and organized several workshops to train the trainers.

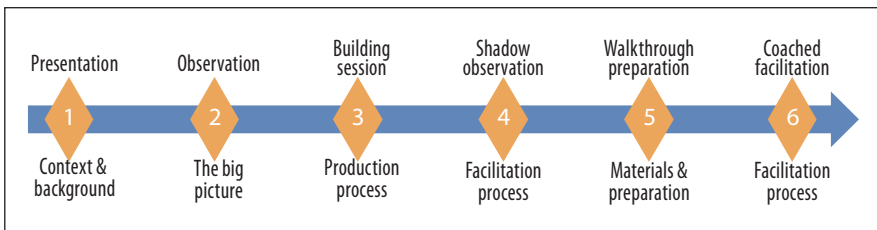


Figure 6. Implementation process

The implementation process (Figure 6) consisted of the following steps:

1. We first explained the simulation game to the trainers in a presentation session, to provide them with the context and background of the intervention;
2. The trainers observed the simulation game run we facilitated with real participants, to reinforce their understanding the big picture;
3. We held a detailed cargo air-carrier building session, in which the trainers had to design and build the product based on the building

instructions, so they could experience the technical challenge the participants were faced with;

4. We facilitated the Leadership Factory together with the trainers, so they could observe our activities and interventions while being in a shadow facilitation role;
5. We held a detailed preparation session in which we walked through all the materials and a facilitation manual, and prepared the simulation game run together with the trainers; and
6. After this detailed walk-through preparation session we let the trainers facilitate the simulation game themselves, while we were there to coach them.

After this last session the trainers felt comfortable to facilitate the Leadership Factory independently and we will hold a couple of evaluation days in the future, to help them reinforce their facilitation skills for running this simulation game, if required.

At the time of writing this article the client has successfully facilitated the Leadership Factory multiple times (Figure 7), and without our support. The simulation is implemented within their existing leadership development program as an integral part of the leadership development program and has an aim of integrating all learning elements of the program in this one day experience.

At the end of each leadership simulation, the participants successfully acted from their specific role in an organization that custom builds cargo air-carriers for their clients and gained insight in the effectiveness of their leadership behavior. Based on the experience in the simulation game, the participants develop their own personal leadership development points that are then used in coaching sessions aimed at developing their leadership competences further.



Figure 7. Impression of the Leadership Factory

8. CONCLUSION

The successful implementation of the Leadership Factory strengthens our belief that simulation games are an effective instrument for leadership development.

The Leadership Factory provides insight into:

- The actual level of leadership competences as defined by the client's leadership model;
- The ability of participants to balance the focus between client results, organizational interests and the feelings and motivations of colleagues;
- The important aspects of an effective organization and how participants can translate these aspects into performance;
- The ability of participants to operate effectively when under pressure and asked to perform in an uncertain and changing environment; and
- The specific actions needed to improve participants' leadership competences and to increase their own effectiveness in their daily job.

The Leadership Factory provides participants with a safe setting to:

- Experience their leadership effectiveness;
- Practice their leadership behavior; and
- Reflect on the effectiveness of their own behavior in order to develop personal development points that can be incorporated in their own Personal Learning Strategy.

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