The staging model: The contribution of classical theatre directors to project management in development contexts

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Abstract

This paper derives principles of staging projects as they emerged in theatre tradition and as they have been formulated by important directors, especially by Reinhardt, Stanislavski, and Brook. The four principles which are proposed to form the staging model for the management of product development projects are: the play–director–actor fit as a criterion for selecting projects, text interpretation as a model for interpretive planning, rehearsals as a novel way to frame meetings during project implementation, and the premiere as the most motivating goal of projects under the conditions of uncertainty, dynamisms, and a lack of goal clarity. The relevance of the model for the management of product development projects is discussed.

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1. Introduction: theatre and product development

The terms directing and staging (in German Regie and Inszenierung, the latter meaning “to put into scene”; similar in French mise en scène) refer to all artistic and technical processes, which transform a text into actual theatrical existence (Jaques Copeau, cited in [1]). This includes both the process of developing the performance and the repeated showing of the performance on stage (the result of staging). Here the first part is of interest, because the development of a performance, from the decision to choose a specific play for the stage until bringing it onto the stage the first time (the premiere), is not only like a project in a metaphorical sense, but it is a project. It includes all features of a standard definition for projects. More specifically, it is a product development project and, consequently, the director has the function of a project manager and the actors form the project team.

Directors and actors, however, will hardly characterize themselves with such modern project management terms, because the history of theatre is much longer than the comparatively short history of modern project management. During this long tradition a set of successful routines emerged which, consequently, could be considered as models for project contexts outside of theatre. This paper derives a set of principles of staging projects which are proposed to especially contribute to development projects. Supplementing recent studies of actual practices of project management in theatres [2], this will be done in this paper by analysing the writings and reports about the practice of classical theatre directors, especially of Max Reinhardt, Konstantin Stanislavski and, because of expressing his principles most explicit in his books, mostly to Peter Brook. They are commonly viewed as most significant figures for the 20th century theatre, as directors and as theoreticians on theatre. Their influence is comparable to the impact of thinkers like Max Weber, Henri Fayol, or Chester Barnard on management.

In the first two sections of the paper I will describe aspects of development projects which are, on the one hand, similar to staging projects and which, on the other hand, provide...
opportunities to learn from staging projects in general and from theatre directors in particular. The subsequent main part of the paper will be structured along these aspects.

2. The relevance of staging for product development contexts

Development projects range from small adaptations of existing products, which require only a small team, to projects like the development of the Boeing 777 [3] with a complex hierarchy of 250 teams. The larger and more complex a project, the more it requires sophisticated processes and tools to distribute tasks, information, and responsibilities and to integrate the various activities. Despite such large differences, compared to, for example, engineering projects, all development projects are characterized through relatively low analyzability [4], high dynamism and uncertainty [5,6], and frequently unclear and conflicting goals [7-9]. While standard project management tools have been designed for a well-structured world of large engineering projects and while they are necessary to some extent even in large development projects, the conditions of development projects may undermine the utility of planning tools [10]. Therefore the standard model and its tools have been either replaced or adapted in the context of product development under high uncertainty or high dynamism [5]. Under such conditions, the ability to clarify the project definition and its goals [9,11], to interpret what is going on in the project [12], the ability to cooperate and integrate team members with diverse backgrounds and team building [13] have been identified as significant drivers of performance. The next section gives an overview of such conditions in development contexts, the main tasks, and frequent problems in applying the standard approach to project management.

3. Main tasks in development projects

3.1. Selection of projects, team leaders, and team members

Selection criteria for R&D projects are based mainly on financial considerations, such as discounted cash flow analysis or real options valuation. In case of a positive project decision, team members and team leaders are frequently selected based on availability, which often results in low motivation, discontent, and low commitment to the project [13]. Lack of leadership and poor team building increase the likelihood of failing considerably [13]. Especially in early project phases teambuilding is equally important and difficult, because teams are usually multifunctional [14]. The importance of project leadership in the context of research and development has found early attention [15]. Since then many studies, based on several leadership theories, have been conducted, although there is a lack of leadership studies in the context of innovation and development projects [9]. A review of this literature [16] suggests that above average performing leaders in R&D contexts engage in multiple roles, show transformational behaviours and vary their behaviours across leader–member dyads.

Sometimes leadership has to be taken over by senior management or even the CEO [17], if an innovation requires support and resources to an extraordinary degree. Taking this into account, the availability of a project leader who is able to work with team members should be treated on an equal footing with technical and financial criteria for the selection of development projects.

3.2. Planning and its relationship to project work

The larger and the more complex a development project the more planning will be necessary to define work packages, to derive an organizational structure, to analyze coordination needs, and to guide the relationships between sub-teams [18]. Because development contexts operate under conditions of high uncertainty, however, plans can hardly be viewed as perfect guidelines through the whole course of the project. Instead of, for example, detailed scheduling of the project with sophisticated PERT graphs, planning will be limited to the setting of frequent milestones and to the assignment of project reviews after fixed time intervals [5]. Final commitments will be delayed as long as possible [19]. Nevertheless, despite of little significance planning results may have, planning processes become increasingly important under conditions of equivocality and uncertainty [20]. At the start a development project requires interpretation of project goals and of stakeholder needs. Further, the higher uncertainty and dynamism the more planning will be recursive rather than being a linear process. Planning tasks, such as information gathering, analysis, alternative generation, and evaluation will be iterated several times until coarse-grained descriptions of problem states result in detailed and concrete specifications. Thus, planning is a process of ongoing interpretation [21].

Consequently, project work can hardly be viewed as mere execution of a predetermined project plan. Even in development projects with large budgets, the final design has to emerge from the process of trial and error learning to a considerable proportion [22]. For this, permanent communication between team members, between sub-teams, with outside experts, customers, suppliers and with other stakeholders through all available channels is necessary [23-25]. Opportunities for intensive communication in development projects are provided through, for example, partnering teams [26], customer–supplier-project triads [27], process-based exchange relationships between customer and supplier [28], and in teams which are formed for specific phases of the project only [29]. However, intensive communication and frequent meetings face potential problems such as political behaviour in projects [30], the overly use of meetings as status-auctions [31], or simply negative attitudes towards meetings [32].

3.3. Tests

Frequent tests and design reviews on subsequent design stages contribute most significantly to success in
development projects [5,33]. For example, the difficulties to predict the needs of potential customers and to judge future acceptance of a product render long term plans useless for projects in ambiguous contexts. Instead, the team has to test prototypes frequently until eventually a product or a service emerges for which a sufficiently large group of customers exists [34]. As it is the case for planning, tests results should not be treated as final or in an isolated fashion. Rather, they are a tool for closely monitoring and documenting the merits and shortcomings of a course of action [35].

3.4. Project closing and evaluation

Both the norms of project management and case studies show the relevance of clear and rigid deadlines in successful development projects [19,33,36], accompanied by an appropriate form of celebration [37]. Schedule performance and the timely closing of a project is often more important than adherence to budget or even module quality [14,22]. Moreover, to motivate employees to work on projects, an appropriate form of celebration at the end of the project should be chosen [37]. However, according to various surveys in development contexts at least one third of projects is delayed [38] and die out in a rather humble manner [39]. The most significant sources of delays in product development are a lack of interfunctional coordination and little support through top management [38]. This suggests that neither the setting of deadlines nor the public announcement of a new product is sufficient for the timely closing of a project. Deadlines have to be accompanied by means for installing a shared vision of the time objectives assigned to the project [40], ensuring motivation of relevant actors, as well as support and commitment of top management [36].

4. Staging

Similar to other development projects, the degree of innovativeness significantly varies between staging projects in the theatre, with most of productions comparable to derivative and platform projects in the typology of Wheelwright and Clark [41]. Also like any other project, each theatre production is restricted by economic considerations, which lead also to some concrete goals, for example in regard to ticket sales. Beyond that, however, because of its artistic nature, usually there are few operational goals available a priori for the staging of a play or artists may refuse to formulate goals explicitly, even if they might be able to do so. Nor are there universally applicable tools or methods, which guarantee the success of a theatre performance. Nevertheless, there are, on the one hand, clear performance criteria which are being applied to the result of the process, and there are, on the other hand, universal aspects for describing the process of staging. In the following I will introduce four principles as they can be derived from theatre practice in general and by the reports and writings of Reinhardt, Stanislavski, and Brook in particular. Taken together, I refer to these principles as the staging model of project management. For this I will use only the process of staging until a performance is developed. The repeated showing of the play is not of interest here.

4.1. Play–director–actor fit

Like any project, the staging of a play is preceded by an initiation phase: a producer or the manager of a theatre considers new promising plays to perform, like the CEO, senior management, or the project office, which is responsible for project selection in enterprises. Beside artistic criteria, even in theatre, economic criteria such as prospective ticket selling will be used to decide upon single plays to stage or upon a whole program of plays. In contrast to most industrial types of projects, however, the selection of a play includes a simultaneous or subsequent decision about, first, a director and, second, a cast of lead actors who are perceived to best fit the chosen play. This reflects the rationale that an isolated choice of plays which might attract enough audience or which fulfills certain artistic criteria is not sufficient. Rather, an outstanding performance requires a director who is able and willing to stage the production and actors who can fill the lead characters. Even in theatre, however, the actual sequence of selecting decisions varies. Whereas in the Germanic tradition producer (the Intendant) and director select actors from a rather stable ensemble of actors, producers of private theatre productions (mainly in Anglo-Saxon countries) may start with economic considerations, where the producers first selects the play, the director, stage managers, lightning designers and scene designers. Actors are chosen only later through a casting, which is described in the next subsection. In the latter cases, the director may try to match actors to his or her own vision of the play through using Stanislavski’s technique of developing a spine for the character, which, for example, Elia Kazan applied for selecting actors [42].

These criteria are not used as independent decision attributes. Rather, a judgment about the potential smooth interplay or the fit between play, director, and actors will be the ultimate criterion for the selection decision. The play–director–actor fit can be attained also through leaving the choice to a selected director who suggests potential plays for staging. Such suggestions will be based on the director’s judgment about the theatre and its ensemble of actors. Sometimes playwright and director cooperate in many productions, for which prominent examples are Stanislawski and Tchechow in Moscow, Hofmannsthall and Max Reinhardt in Salzburg, or Peymann and Bernhardt in Vienna (Peymann, cited in [43]). In addition to this already complex judgment, most theatres attract a certain type of audience, sometimes represented through subscribers, which will be considered as an additional variable in the evaluation of play–director–actor fit. This practice has a long lasting tradition since the ancient Greek authors
(especially Aischylus, Aristophanes, Sophokles, Euripides) who wrote their tragedies for a specific stage, directed the production either themselves or chose their directors. Sometimes they even played the lead character, which is a special form of the “triadic collusion” of playwright, actors and audience [44].

As I have already mentioned, even theatre productions may have a set of clear goals and performance criteria, especially in regard to the evaluation of the audience and of critics. These criteria will also influence the selection of projects, but they are never sufficient for this. Accordingly, with the play–director–actor fit the theatre represents a model in regard to the selection decision for those project contexts in which at or before the start of the project meaningful goals, organizational criteria or market criteria are hard to formulate or where such criteria are not sufficient to draw a selection decision. This is the case for projects which contain high equivocality at their initial stage, which is likely in product development and especially in radical innovation. In such situations, formal analysis for the project decision, such as calculations of internal rates of returns and discounted cash flows may be important to gain external legitimacy [45], but it will hardly increase rationality [46,47]. Rather, decisions will be based on a more intuitive than quantifiable judgement. The potential value of a project’s outcome will only unfold as the project manager (representing the director) and the team (representing the actors) work on the project. A project manager facing the decision whether to accept an assignment or not, has to assess the potential of such an interaction. For this, prior experience of the project manager in functional areas which are related to the project content (representing the play, the script) will be of little relevance. Still, as the director at the theatre needs some technical knowledge about equipment (lighting, stage mechanics, etc.), the project manager has at least to learn the technical jargon of experts in her team. More important, however, is the ability to interpret unclear project definitions, to understand the intentions of project initiators (i.e. the playwright), and the intentions and skills of potential team members in leader–member dyads [16]. Further, because plans and control tools are of limited relevance in development projects, the project manager needs to be able to improvise together with his or her team members [48], especially under time pressures [49]. Other than in theatre, however, large industrial development projects employ not only one project manager, but a hierarchy of senior managers, project managers, and often hundreds of sub-project managers with corresponding teams and sub-teams. Any of these project manager roles are comparable with the director in theatre to the extent that the project manager is responsible for the project or the sub-projects outcome. As the distribution of responsibilities and of autonomy may vary between producer and director in theatre, it varies between senior management, project manager and sub-project managers [17,18].

The decision of the project manager to accept an assignment may be shaped frequently by personal considerations, like the attractiveness of the project as a career opportunity. Sometimes project managers even initiate high-risk projects, only to put themselves in a highly visible position. The project provides the opportunity to communicate with influential decision makers that are inaccessible for those engaged in routine work [23–25]. Possible self-serving tendencies in such networks [30,51] may become dysfunctional if the visibility of the project within the organization is more important than the final result.

Similar, a theatre director will fail when selecting plays to satisfy solely personal needs without considering decision criteria related to the theatre and its audience. Like a theatre director, the project manager has to choose whether to see the project as a stage to maximize personal visibility and to utilize the project for self-serving purposes to the maximum extent or to focus on the final result, which is judged through audience and critics, in the case of theatre, or the market in the case of product developments. For probability judgements in regard to final success the project director will evaluate the fit between the project’s definition, own preferences, the potential team members, and environmental conditions.

Still, visibility during project work has some utility for increasing attention to the final result. Visibility increases through communication of a crisis to stakeholders. Whereas project managers usually tend to present a picture of a smoothly running project to senior management or customers, theatre productions strategically utilize reports about crises during a production as marketing tools to heighten media attention for the production. Although such a practice in a product development project may lead to increased outside control, to a reduction of autonomy for the project team [18], or even to a premature termination of the project, it will at least heighten awareness in regard to a project, which in some industries has helped firms to build a certain kind of reputation [52]. Beside the mentioned dangers of crisis in project work, there are also some potential positive effects in project work. Stakeholders learning about difficulties during project work, will not only adapt their subjective probabilities in regard to project success, they will also adapt their reference level in regard to the outcomes of the project. As a consequence, a subsequent success will be framed more likely as a gain [53] and will receive more attention. The literature on product development also provides examples of proactively constructed crises as a strategy to increase attention for a project, to foster effort, and to facilitate learning [22], such as product developments at Hyundai [54], Canon [55], and Komatsu [56].

4.2. Casting and interpreting a text

The previous section described how the decision to perform a play with a particular director already includes judgements about possible lead actors. This pre-selection
has to be finalized, possibly adapted in the next phase of staging, and the director assigns actors to all characters. This process of casting is similar to team building and resource planning in other project contexts. Casting starts the gradual evolution of the final performance, because through assigning living people to characters the abstract text starts to “live” itself. Similarly, the project organization for a product development not only mirrors the final product [18], but the final product starts to virtually exist through team members working on certain sub-tasks.

Casting starts the process of text interpretation through discussions between director and actors. Text interpretation is, on the one hand, a special form of planning and, on the other hand, a way to define the project. The importance for interpretation for theatre and organization has been highlighted already through Mangham and Overington [44] and is described in detail through Simon [12]. Whereas, however, explicit scripts in organizations are rare to find ([44], p. 173), projects do have a text, which is some kind of project definition, a project charter [41], or at least a draft for a project plan, requiring interpretation. Therefore, interpretation during staging is among the most interesting aspects in theatre of which projects in development contexts can take their lessons. Max Reinhardt describes this process comprehensively:

“You read a play. Sometimes it ignites straight away. Excitement stops your reading. Images are flooding. Sometimes you have to read it several times before a path is emerging. Sometimes no path is emerging at all. Then you think of casting the leading character and the supporting characters, and you realize the essence. You see the context, the environment, the overt appearance. Sometimes the actor has to be adapted to the character, if that is possible; sometimes the character to the actor. The play as read, the play as performed: never an absolute congruence.” [57].

The playwright provides a theme which is only the basis for the creative process of staging and directing. Text interpretation has been introduced as the probably most important part of the director’s role only during the 19th and the 20th century. Before that, beginning with the leader of the play in ancient Greek theatre (didaskolos), until, for example, the actor-manager in British theatre of the 18th and the 19th century, the role of the director was restricted to a mere administrative function, like providing scenery, or coordinating and controlling actors. Sometimes author and director are the same person, which has also a long tradition beginning with ancient Greek tragedies, but is less common in modern theatre. In these cases, interpretation is either not necessary or it takes the form of rewriting a text. Stanislawski and Reinhardt played prominent roles in establishing directing as an art in its own right, through interpreting the dramatic texts and adapting the writing in a way which allowed to exploit the full potential of their actors. This included also novel ways of building sceneries and the use of innovative stage technology.

Text interpretation refines the fit between play and lead actors. Although the director sometimes cooperates with the playwright during this process, she keeps the leading role. Now, as the play has been chosen, all characters have to be fitted to available actors and vice versa. Text interpretation and the “working of the actors on their role” [58] are interrelated processes. This implies that the actor’s task is much more than mere learning of the text to reproduce it at the correct time. Actors need to interpret the intentions of the playwright (that which pressed the playwright the pen into his hand; [58], p. 43) to work on the role in a creative way. Text interpretation reflects the assumption that there never exists a one best way – neither to act, nor to direct or stage a theatrical text. The opposite assumption would lead to “dead theatre” [59].

With the notion of project plans being similar to dramatic texts in theatre, the above principles directly translate to projects in development contexts. All parties involved in the project, from steering committee to team members “jump into their roles and sign up to their responsibilities” [60] as they are prescribed through the project plan. However, the project plan for product development projects is only a coarse description of these roles and of associated work packages. It needs to be interpreted like a dramatic text [12]. In Wheelwright and Clark’s terms [41], starting with a project charter, project manager and team members have to develop a contract book for the project. To the degree that projects are new to the organization, when goals and methods are unclear, interpretation becomes re-creation in regard to many aspects of project work [60]. However, just like in the 17th century theatre, ambiguity avoiding management [61] often views the need for interpretation as a shortcoming of the plan rather than as a starting point for a creative process. As a consequence, interpretation by agents other than top-management personnel has the flavour of an underground activity without formal approval. “While some autonomy arises from formal delegation at the start, participants mainly work out the allocation of autonomy during the course of task performance” [18]. Still, if the result turns out to be a success, the project manager will hardly receive any credits for interpretation. Only if the project ends as a failure, the project manager will likely be used as a scapegoat [62] and will be blamed for misunderstanding the project definition (the Austrian Empire, when it used to be a monarchy, is famous for introducing the so-called “Maria-Theresien-Orden”, a decoration which was granted if the disobedience to an order led to the winning of a battle. In the other case the man has been hanged). Gerwin and Moffat [18] also maintain that “heavyweight teams” expand their discretion through assuming that they have authority to interpret the plan, because “it’s easier to get forgiveness than permission from management” (p. 302).

Despite being commonly neglected by senior management, interpretation of initial project definitions and of vague goals has to be appreciated as a genuine task, which requires special intellectual and social skills. These skills
are also essential for the planning approach during staging, which has been introduced before as interpretive planning [21]. At the core of interpretive planning is face-to-face negotiating to advance relationships and trust, and to gather information through networks. Through interpretative planning and trial and error learning during iteration of planning tasks, the fuzzy vision of the original conception evolves gradually into a final product design [22]. Such planning processes are rather informal, relying on intuition, personal information and values. Interpretative planning also often calls for improvisational behaviour and vice versa [62]. Whereas a traditional view of planning sees the controlling of future developments as the main goal, the focus of interpretive planning is more on gaining commitment [21] to the project goals and methods.

4.3. Rehearsing

Text interpretation continues during rehearsals. The time period for rehearsing parallels the implementation phase in project management terms. Here, staging in theatre surfaces as a truly developmental and dynamic process. The whole performance, that is each single scene, is subject to change until the last rehearsal. The development of a single scene or of the behaviour of a character during a rehearsal will affect the performance in all other scenes and the behaviour of other characters as well. Therefore rehearsing is far more than a mechanical task. Its main purpose is neither to train actors nor to plan other technical necessities like the time of appearance or disappearance on stage for each actor, or to decide where to stand and when to speak.

Rehearsals embody two important aspects for projects in development contexts: First, the option to change the whole production at any time [19] and, second, the possibility of direct, real-time experiences. For both aspects cooperation in teams is essential. In rehearsals the process of staging emerges as a genuine team task under the leadership of the director. Still, the dramatic text prescribes the structure of the team and its members’ interactions to a large extent. But beyond that, for excellent individual performance it is hardly sufficient that actors work on their roles in an isolated actor–director dyad. They need to react to each other in a way which takes the individual interpretations of the roles of the other actors into account. Such an ongoing group experience is essential for improvisation during rehearsals and for later performances. Interpretation is a dynamic process, impossible to capture in a written document. Actors can learn about interpretations of others only through direct observation in rehearsals. Interpretation is an experience happening in the present. Conversely, actors influence interpretations of their peers’ roles by expressing verbally and non-verbally their interpretation in rehearsals. The director moderates this process through constantly giving feedback to actors, correcting their behaviour and describing his or her interpretation of a character. Feedback is based on evaluation criteria like originality, innovativeness, and aesthetic criteria. In theatre, as in many other project contexts, such criteria can hardly be formulated a priori. Aesthetic criteria are always hands-on in the sense that they materialize on concrete problems [59]. For example, the position of a chair in the scenery can not be judged by pure standards of art, but it has to be positioned in a way, which allows the actor in a particular scene to move according to the requirements of the situation. Evaluation standards co-evolve with rehearsing by trying out different alternative behaviours and subsequent reactions, thereby revealing the effect of these alternatives. This, together with the prescription of roles and characters and their different interpretations, surfaces social and behavioural patterns, emotions, and organizational phenomena in a much more direct manner than “natural” contexts [59]. Through this, staging goes beyond the mere written content of the text.

Such aspects of rehearsals are represented in development contexts especially through tests [5,33], organizational prototyping [64], and intermediate objects of design [65], which enable concrete experiences with potential results of the project. At Ericsson, for example, this is called “practicing the process” [33]. The main purpose of all of these tools is to reveal social relations, to show the dynamics of the interaction between individuals, between sub-teams and between artefacts generated in the project in a more condensed way than in mere meetings. Tests enhance the chance to clarify misunderstandings which otherwise are hard to avoid in complex product development projects [24,66]. Depending on the type of developed technology, formal testing can be done through automated procedures, like in software development, or occurs at scheduled milestones, where specific targets or the fulfillment of design criteria are evaluated. The more design iterations are made, for example in processes of parallel development, the more testing will be informal, which takes place especially in multidisciplinary project teams and in a network of experts. Test results, however, are hardly self-explanatory. Again, interpretation and reflection is necessary, both in regard to the adequacy of a design at a preliminary stage and in regard to test results. Similar to theatre rehearsals, Garud and Karnoe [35] show for the development of wind mills that in the successful Danish development path, compared to the US approach which relied on much more invested money, testing standards co-evolved with technological developments.

This process of testing and reviewing within multidisciplinary project teams and within a network of experts has to be controlled through a strong, powerful, heavyweight project manager [5,41], or a process champion [16,67], who is similar to a theatre director, because a given interpretation of test results has to be accepted both by the project team and by involved stakeholders, especially by other teams working simultaneously in large development projects. The project manager has to act as boundary spanner, facilitator, and should stimulate innovation [68]. If the project leader either does not have the ability to interpret
or does not have the power to give interpretations which find acceptance by these groups, then test results, instead of decreasing uncertainty, will increase equivocality [47]. In such cases, or if the authority of the project manager is not sufficient, project development has to be supported through senior management or even the CEO, especially when additional resources are required for marketing of a highly innovative product [17]. Also, high equivocality, that is the existence of multiple, mutually conflicting interpretations of the design state among team members and other stakeholders, requires the ability of the project manager to balance between two opposing forces, or, in other words, to manage a paradox of organizing [69]: first, to constantly re-interpret previous agreements and, second, to push the process further.

From this staging perspective, milestones, tests, and meetings are seen as part of a recursive process, rather than forming a linear progression from beginning to increased completion of tasks. The interpretation of initial agreements – like the project definition, the project’s goals, and first planning results – unfolds over time and evolves into a final design. It requires permanent reflection within the team, which has been shown to positively influence project performance in innovation contexts [70]. Interpretation and reflection is facilitated through rich interaction between project manager and team members in regular and frequent meetings involving suppliers, customers, and other relevant groups in the environment. Recursions and iterations are usually experienced as unproductive if initial agreements are discussed again and again in every meeting. Boredom and frustration with meetings [71] will surface quickly. Attitudes toward meetings tend to be especially negative under highly ambiguous conditions [32]. Nevertheless, project managers who use frequent team meetings and who test in cooperation with outside personnel appear more powerful than project managers who choose a rather technical approach [72]. Successful project managers, besides closely working with their project team, install regular meetings with engineers who are not associated with the project. This practice provides opportunities for critical feedback and increases the chance of acceptance of the final solution by involved outsiders.

A powerful project manager who is able to moderate and structure the process similar to a director in rehearsals may reduce negative attitudes towards meetings. Successful project managers will frame meetings as rehearsals and they will explicate for all participants what it means to view meetings as rehearsals: as opportunities to deal with equivocal situations through ongoing re-interpretation of the project plan and the product’s design. This implies further the need to structure each meeting as a small stage performance, with its own dramatic structure, with clearly assigned roles and with an underlying text. Peter Brook, rather than starting with a first reading of the text, applies exercises with actors, which, at first sight, have nothing to do with the play. Similar practices can be observed in product development when team members from very different cultures get together, like it is reported from the early stages at SEMATECH, where much effort was spent for forming culture through meetings [73]. Thus, each meeting is treated like a small project on its own, because the orientation towards the project goal is replaced through a specific goal, which is set for the meeting (in case of SEMATECH the goal of building a team culture). To assign and to sell such goals to the group is a main task of the project leader [74]. But in contrast to an engineering approach, such goals can not be deduced directly from project goals. Instead, the project manager has to assign goals for the meeting which fit the needs of the specific situation within the project. Beyond project management, already Westley and Mintzberg [75] used Brook’s [59] concept of repetition to explain the way how visionary leaders communicate and act. Just like actors and director learn through repetition before and during rehearsals to enable them to perform effortlessly, the project manager and team members shall “develop an intimacy with the subject at hand” ([75], p.18) through repetition.

Framing meetings as rehearsals applies especially at early stages of the project, because equivocality and uncertainty should decrease during the course of the project. Of course, even a recursive process has to lead to some end. Interpretations will become more fine-grained with each step, allowing all participants to more clearly focus their efforts or, eventually, allowing them to re-interpret previous agreements. Providing concrete experiences facilitates this process. More than in theatre, where the actual playing of scenes fulfils this function in a natural way, in industrial projects concrete experiences have to be created through artefacts [11,19,65,76].

4.4. Premiere: the clear goal of projects with unclear goals

Besides representing the end of the project, the premiere is the project’s essential evaluation. The reaction of audience and of critics during and after the premiere largely determines the outcomes in regard to other success criteria, such as audience attendance in later performances, length of staying on the repertoire and monetary returns. Of course, and just like it is the case for other product launches, commercial theatre productions are frequently tested through performances in local theatres (“Off Broadway”), before bringing them to major theatres. Sometimes they may never get there, if the test shows very negative reactions. In the other cases, however, the central importance of the first night is maintained, even if some of the uncertainties have been reduced through the tests. More important for project management in general, the premiere has an impact for the whole process before, because it is also the most motivating goal of the project. As Peter Brook ([59], p. 98) puts it:

“From the first rehearsal, the aim is always visible, not too far away, and it involves everyone. . . . The pressure
of a first night, with its unmistakable demands, produces that working-together, that dedication, that energy and that consideration of each other’s needs that government despair of ever evoking outside wars.”

This parallels exactly the observation of proponents of huge development projects in the early days of project management. One of them, Simon Ramo issues doubts that after the end of the Cold War “the tight, closely integrated systems management that proved so effective...” will not be possible to be set up again (Simon Ramo cited in [77]). Still, there are several reports how the systematic use of tight and rigid deadlines intensifies cooperation and learning within product development teams [33,66]. As has been already mentioned, time related goals, that is short development cycles and the adherence to the deadlines, are in most product development projects much more important than low costs and even than quality related goals [14,22]. Paradoxically, however, theatre staging, presented here as a model for projects where goals and/or methods are lacking, turns out to be focused through the premiere to a degree, which seems to be lacking even in large technology projects. Because clear goals, which would allow judging the appropriateness of different solutions to a problem, are missing at the beginning of the project, a clear and celebrated end of the project becomes especially important. This is provided through the premiere. Outside of the theatre, however, skilful closing of projects has found virtually no attention in the literature on project management. Similarly, in management practice there is often much more attention created for the start of a project than for its closing. In many cases this reflects decreasing interest of all stakeholders during the course of project time. It signifies also the fact that some projects never reach a satisfying end [38].

Still, there are examples for project closings, which are staged like a premiere. For instance, large computer firms or software corporations, like Apple or Microsoft, launch their new products through big events, which draw the attention of media worldwide. On the one hand, this is done for marketing reasons. On the other hand, these events provide immediate feedback about the products attractiveness, because the event and its media attention put pressure on product analysts to provide evaluation and comments, just like critics who have to write about a premiere, thereby allowing quickly to judge future success of the new product. As the examples suggest, the premiere incorporates marketing of the product as an important part of the development project. Lynn [17] shows how highly innovative products fail to attract customers, if their launching is done half-heartedly. The premiere of a product, just like for a theatre production, is the ultimate opportunity to present the result of the development process to the audience. The success at the premiere largely determines the success of the product over its whole lifetime. This further suggests, that the planning of product launch is not a task which can be left to a marketing department alone. Rather it has to be viewed as the last and, sometimes, the most important task of the development project, requiring a multifunctional team.

The utmost importance of the premiere is further illustrated by looking on the history of theatre. It shows that the ultimate motivation for the earliest documented theatrical performances has been the first night, because it has been the only night. Therefore, an ancient Greek term for premiere would have been meaningless. In the 5th century Greece (B.C.), the state sponsored a prize, the agon, for the best tragedy shown at the Dyonisos festival. Originally, those tragedies have been written only for this festival, for a particular stage (at the back of Athen’s pantheon), for certain actors (at the beginning the first character, the protagonist, has been played by the playwright himself), and only for one performance. Prizes not only have been given for the playwright (Aischilos, Sophoklos and Euripides), but also for the actors and the organization of the play, which is comparable to modern stage management. Similarly, at the beginning of modern project management, the state ordered competing developments, like one project for developing a strategic air control system (SAGE) at MIT and a parallel project at the University of Michigan, out of which important computer developments like Jay Forrester’s Whirlwind came [77].

Table 1 summarizes the aspects of the staging model in relation to the main tasks during the course of product developments and in relation to frequent problems which have been found in the literature to distinguish successful from failing projects.

<table>
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<th>Table 1 Staging and standard management of development projects</th>
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5. Discussion

Some aspects of the staging model may inform all types of projects. However, its description always referred to the similarity between product developments in the industrial context and the development of performance in theatre. One of the most salient features of both contexts is the lack of clear goals at the beginning of a project. As a consequence planning has a very different meaning than in, for example, engineering projects. Therefore, the paper assumes relevance of the staging model for product developments but not for projects in construction and in engineering contexts, for which approved routines and more or less standardized methods exist.

It remains to be discussed whether the staging model should be viewed as a replacement or a supplement to standard project management. Generally, the staging model should be seen as an addition to standard project management, because the latter has obviously contributed significantly to the success of projects also in development context, especially in large projects. But the staging model also shows that some traditional guidelines may be misleading. First, to view a development project in the light of staging will inform the selection decision in a different way than traditional financial considerations, such as real options valuation. The selection of projects will be based stronger on the fit between project content, project manager and team members, as it is described through the process of casting. The importance of selecting the appropriate project managers and team members have been emphasized already early in the project management literature. However, in contrast to traditional approaches, where this selection is seen as a subordinate task after selecting the project based on criteria in regard to strategy, the market, and financing, the staging model presented here treats the fit between project content (play), project manager (director), and team members (actor) as the central selection criterion, which informs all other decision criteria. Even if financial criteria suggest a potential success of a product, a development project should be started only if a fit between project content, leader, and team members can be attained. Second, whereas the frequent observation that plans render meaningless in an uncertain and dynamic world leads often to negative attitudes against planning and meetings, the staging model highlights planning as ongoing interpretation. Further, to view meetings as rehearsals suggests that plans and associated tasks will not be finished at specific milestones but need to be constantly reinterpreted and redone just like a dramatic text. It will provide with an increased awareness for the non-linear dynamics of development which can be handled only through constant rehearsing. Finally, the increased awareness of limited time for product development not only as a restriction but also as a motivating force is expressed through framing the project's closing as a premiere. The history of theatre shows also that the pressure of rigid deadlines is but a new invention of recent shortened development cycles. Rather it reflects, on the one hand, the ultimate importance of the premiere for staging and, on the other hand, the strongest motivational force for team members. Although the paper does not go into the details of marketing for an innovative product as an important part of development projects, the premiere is proposed as a prominent means to incorporate such tasks into the development project, instead of leaving it to an isolated marketing department.

Generally, the staging model stresses the importance of the project manager. Leadership studies and the writings of the classical theatre directors, which where used for this paper, somewhat converge in showing the importance of leader–member exchange for successful development projects. Especially for large-scale developments, however, where there is not only one project manager but a complex hierarchy of managers and teams, this role seems to lose importance. But the model is applicable even if a manager and the team are only responsible for a small module within a large project. A project manager who sees herself or himself as a director will place more emphasis on orchestrating the interplay of technical imperatives of the project (the text), the potentials of the organization (the stage), and its team members (the actors). Overall, the practicing managers and the owners of development projects may gain from the staging model by receiving a fresh look on their roles, which they may have seen solely from a technical or an economic perspective.

In this paper a number of studies are cited which illustrate how the principles of the staging model may translate into non-artistic development contexts. In this regard, the staging model contributes to the description of successful practices and may guide future research. Empirical research should also examine the effects of focusing on these aspects and should compare these principles to more traditional ways of managing projects in development contexts. More specifically, the aspects of the staging model can be directly translated into empirically testable hypothesis about effects of alternative methods to select projects, to use planning and meetings, and to manage time in development projects. For example, the association between, first, the degree of fit between project content, project manager, and team members (play–director–actor fit) and, second, performance criteria, such as quality or speed of development is a candidate for empirical testing. Other hypotheses could refer to process criteria, such as the association between the way meetings are framed by team members (rehearsal) and the degree of satisfaction with the processes during the project. Further, the influence of the amount of ambiguity, uncertainty, and tensions through enacted paradox associated with the development project should be examined further. The model proposes that the framing of the project's end as a premiere will motivate the whole process of development projects far beyond mere considerations in regard to cost and competitiveness.