

The Goal Matrix – A Model for Developing Shared Cognition in Teams

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Abstract

The purpose of this article is to present a model for developing shared cognition in teams, called the goal matrix. The theories and research behind the model is presented along with practical guidelines on how to use the model within a team. The model starts with the overall purpose of the team, why it exists in the first place. Then it defines an internal perspective, concerning team members and their roles, and an external perspective, concerning the stakeholders of the team. The purpose and the relationship between the internal and external perspective defines the context of the team. Further, the model describes three aspects of goals depending on the time horizon; process goals, future results and visions. The place and the time dimensions on goal achievement form six types of goals. These are internal standards and external standards, development goals and operative goals, guiding stars and vision.

Keywords: Goal setting; Goals; Context; Model; Teams; Shared cognition; Team cognition

Introduction

As work has become increasingly complex and work teams has received increasingly intellectually demanding tasks, interest in information processing in teams has grown [1]. The information work teams need to process and integrate, i.e., share, are for instance information about the task, characteristics of the team and its members, cooperative patterns and the wider context in which the team exist. Shared cognition [2] or team cognition is an important driver of team effectiveness [3]. The purpose of this article is to present a model that suggests what a team needs to share cognition about. The model guides team members to clarify the teams' purpose, roles, stakeholders and six types of goals depending on time and place. The emphasis on goals in the model is motivated by research findings on the effectiveness in clarifying shared goals [4]. The model has been presented in short before [5], but is here further elaborated.

Time

According to Austin and Vancouver [6] goals are defined as "internal representations of desired states, where states are broadly construed as outcomes, events, or processes" (p. 338). The goal construct is wide in psychology; it does not only concern future states to be reached but also present processes to be upheld. To distinguish the former from the later Frese and Zapf [7] described performance goals in the future as "End state goals", and goals concerning processes to uphold as "Process goals". Process goals can be described as being a standard that is to be maintained, every day and in each individual situation, end state goals are something we strive to achieve in the future. The main difference between the two types of goals is the time, which is the first dimension in the goal matrix. In the model, there are three categories of goals depending on time, goals to achieve now, later, or maybe later:

- *Now* - Goals to maintain (process goals), standards, explicit norms or rules.
- *Later* - Goals to achieve in the future (end-state goals), i.e., a future state to reach or performance to achieve.
- *Maybe later* - Goals to strive towards (visions), goals that are attractive to team members and gives a direction but is difficult to reach or belongs to the far future.

Place

Agazarian [8,9] describes in her "Theory of living human systems" contextualizing as a way to develop a systems (e.g. a team) function. According to Agazarian [9], contextualizing is a way to increase one's awareness of the context of one's experience. From another standpoint, Hackman [10,11] studied why some teams were more successful than others. He identified three areas that they were successful in; they satisfied internal and external clients, the members found meaning and satisfaction within the group, and they developed capabilities to perform in the future. The third area was described as something that grew from the second one, members finding meaning and satisfaction in their teamwork. Taken together, the importance of contextualizing actions and experiences, and the two main areas of team achievements, within the team and with regard to clients or stakeholders, contributes with a second dimension in the goal matrix, place:

- The *internal* perspective is about the team, what is important for us to do in order to do meaningful and satisfying work.
- The *external* perspective concerns what the team shall deliver to others, the stake-holders, what the customer wants or what other organizational parts expects.

Goals Depending on Time and Place

Together, time and place forms a matrix of 3×2 , altogether 6, categories of goals for teams:

1. Now, internal - Internal standards, standards of cooperative behavior within the team.
2. Now, external - External standards, standards of interacting with or approach towards stakeholders.

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Received: June 09, 2017; Accepted: June 13, 2017; Published: June 20, 2017

Citation: Jacobsson C (2017) The Goal Matrix – A Model for Developing Shared Cognition in Teams. Clin Exp Psychol 3: 151. doi: 10.4172/2471-2701.1000151

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3. Later, internal - Developmental goals, goals for how the team wants to cooperate together in the future.
4. Later, external - Operative goals, goals for delivery in the future to stakeholders.
5. Maybe later, internal - Guiding stars, Ideals of how to cooperate, or what atmosphere is wanted within the team.
6. Maybe later, external - Vision, A possible future state with regard to stakeholders.

Three Contextual Anchor Points

Further, there are three anchor points in the model, which couples the team with its context. Firstly, the team members need to have a common understanding of the organizational function of the team, why it is a team in the first place. Secondly, if we locate the starting point of the internal perspective, who should work together in order to serve the stakeholders, there are members of the team with different roles. Thirdly, the team's understanding of its stakeholders represents the external perspective in the model. Together, the team members' development of a common understanding of these three anchor points' help them build a shared cognition of the team's context.

Purpose

A team needs a common understanding of the purpose of the team in order to develop a mutual interdependence that is conscious and shared among team members. This is related to the concept of being a "real team", as suggested by Hackman [10], having a shared assignment or mission. The purpose tells the team members why it exists; it defines the team and describes its function in the organization. The purpose also sets the framework for what tasks the team will perform and what goals are reasonable to set. Team members having a common idea of why the team exists is the most basic and therefore the most important part of the goal matrix.

Members/roles

Members of a team will ideally have unique roles. The fact that every member contributes uniquely to the team facilitates high performance. Teams also need to be fairly stable across time with regard to membership, in order for team members to learn how to interact with each other [12]. Clarifying members roles is, together with clarifying goals, generally an effective intervention in teams [4].

Stakeholders

Stakeholders are "those groups without whose support the organization would cease to exist" [13]. Stakeholder theory usually has the starting-point at a board or share-holders of an organization, applying the concept of stakeholders to teams within organizations will alter the scenery in the way that a board of an organization could be important stakeholders to a team, e.g. a top management team. In most teams, there are two types of primary stakeholders [14]. The first are those who have actually put a stake, who invested, in the team. They've either employed the team members or pay their salaries. The other types of stakeholders are those who expect the team to help them with something, for instance clients. Figure 1 describes the goal matrix.

Guidelines to Using the Model

Generally, to develop a shared idea, it is important to note different team members' answers and work together in order to find a common understanding of the team's purpose, as well as sharing ideas and agree about the other parts of the model. The first steps, in working with the

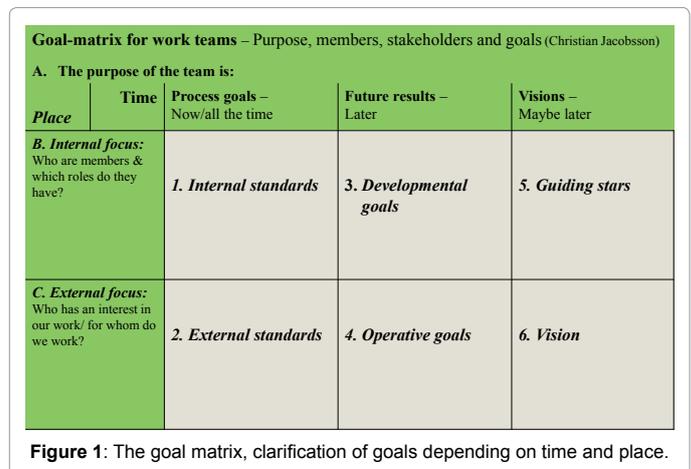


Figure 1: The goal matrix, clarification of goals depending on time and place.

goal matrix, are to agree upon a common purpose and be clear about memberships/roles and stakeholders of the team.

Purpose - why are we a team?

Purpose is distinguished from the concept of goal in the sense that goals are what we strive for, and the purpose is why we do it in the first place. Other concepts with similar meanings are: the overall task, the mission or the (organizational) function of the team. Effective teams have members that have the same idea about the purpose of being a team. The purpose also determines what our tasks are. Guiding questions for making the purpose of the team a shared cognition between team members could be: *What is the purpose of our team? What function can or should our team have for the organization?*

Member roles – Who is in the team and what roles do they have?

When everyone in the team has the same idea about who the members of the team are, the next step is to explore the roles in the team. Roles can be divided into two types, functional and generic roles. The functional role is basically what's in the job description, responsibilities related to the specific job assignment, and it's often unique for each team member. Generic role concern behaviors that everybody can do that support the cooperation. For instance, clarifying things for the whole team, asking questions, summarizing the big picture, stating priorities and providing guidance to other team members, remind of noting and correcting by using feedback. Questions to explore for the team could be: *who are members of the team? And, in what ways does each member contribute to fulfill the team's purpose?*

Stakeholders - Who do we work for and who has expectations on us?

Stakeholders are those who will benefit from the team's work. In most teams, there are two types of stakeholders; those who actually has put a stake in the team; who have employed the team member or pays their salaries, and those who expect the team to help them with something, or who have dependencies on the team. Many teams work more efficiently together if they have a clear and shared perception of what stakeholders they have or for whom they work. As a rule, it is a good idea that the team has a reasonable balance over time with regard to which stakeholders it satisfies. A possible question to the team to clarify their stakeholders can be: *Who has an interest in what our team achieves?*

Internal standards - what behaviors do we need to show in order to have a smooth cooperation?: Internal standards set the frame of reference for what behaviors team members expect from each other. Internal standards concern the team only. They're standards to uphold in the present moment that are possible to start to implement immediately. For example, we shall start our meetings on time or we shall listen to each other and don't interrupt. A way to test if the internal team standards are written as behaviors is to ask: *Can you perceive when this particular behavior happens and when it fails to happen?*. Internal standard could preferably be made as a short check-list of expected cooperative behaviors in the team and serve as a brief that the team follow up in debrief sessions [15].

External standards - how do we want to be perceived by our stakeholders?: External standards concern the stakeholders. In other words, standards of interacting with or approaching stakeholders that is possible to display in the present moment – and that are possible to start to implement immediately. External standards concern how the team wants the stakeholders to perceive them as a team. Does the team want to be perceived as for instance service-minded, competent and responsive?. From the stakeholder perspective, the teams capability to meet expectation is to a large extent captured by the concept of service quality [16]. A question to discuss might be: *what impression do we want our stakeholders to have about us?*

Developmental goals - what do we need to develop in our ways of cooperation?: The team's developmental goals aim to clarify how the team wants to work together in the future. Team diagnostic surveys, such as Team Climate Inventory [17] or Group Development Questionnaire [18], usually provide with information on development areas of the team. They might for instance concern that only a few members talk at meetings, the goals of the team has not been discussed enough, members hesitate to give each other feedback or that the team is reluctant on following up decisions. A question to explore development goals could be: *in what ways do we want to cooperate better in the future?*

Operative goals - what are we paid for?: The operative goals represent what a team aims to achieve with regard to their stakeholders. Basically, it answers the question: what are we paid for? High-performing teams have clear and shared goals related to their purpose, they have the same idea about what they are devoted to accomplishing. Most research on goal setting has been made on this type of goals, for instance much of the research on goal setting theory [19]. Operative goals concerns task performance of the team. A possible question for the team to explore is: *what do we have to deliver to our stakeholders in the near future?*

Guiding stars – how does our dream team look like?: The team's guiding stars are about shared ideals in the team on how they should work as a team. They are team virtues and values to relate to, but that is not always easy to live up to. For instance virtues like transparency, integrity and trust [20]. Internal standards are more concrete and possible to follow up compared with guiding stars. A possible question is: *how does the cooperation look like in your dream team?*

Vision – what is our valued direction?: A vision is best in the singular form because it is supposed to set one direction for the team. The vision concerns the team's stakeholders and is basically a picture or words describing a future state desired by the stakeholders and the team. It is an offer or promise from the team to the stakeholders. A vision should be challenging and possible to reach in the future. A vision involves formulating a relatively abstract and far-reaching idea, while effective (operative) goals involve formulating specific, challenging and

time-constrained objectives [21]. A start-up question to formulating a vision is: *if we use the team's full potential - what can we then offer our stakeholders in the future?*

Summary

In summary, there are three contextual anchor points in the goal matrix, which connects the team to its organizational context and creates borders between the team and its stakeholders. Further, the model is based on two dimensions for setting goals, time and place. The place dimension is twofold, internal and external. The internal perspective concerns the team and the cooperation of its members. The internal perspective has three types of goals depending on time for delivery: internal standards, development goals and guiding stars. The external perspective concerns the stakeholders of the team. Again, there are three types of goals depending on time for delivery; external standards, operative goals and vision.

Disclosure Statement

No potential conflict of interest was reported by the author.

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