Developing a Technology Supported Collaborative Strategic Planning Process for Higher Education

Completed Research Paper

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Abstract

The process of strategic planning generally requires a large group of individuals work together to diverge and converge on a vision, mission, and core values. Research suggests these activities are critical for the advancement of a group task. However, this type of group work is time consuming and it has been shown to be a slow and painful process. The goal of this research is to develop and test a repeatable collaborative process for strategic planning in an Information Systems department with a College of Business at a medium-sized U.S. public university. The repeatable collaborative process in this research uses group support system technology and facilitation. Survey results and qualitative comments from the IS department participants show that satisfaction related to the strategic planning experience was high and that that the process was a success both from an individual and group perspective.

Keywords

Strategic planning, collaboration process, higher education, electronic meeting systems, group problem solving, meeting facilitation, goal attainment.

Introduction

Johnson and Scholes (2002, p. 4), describe strategic planning as "an attempt to match the resources and activities of an organization to the environment in which it operates and define and articulate objectives and develop strategies to reach those objectives." The purpose of strategic planning is to develop desirable future results by adapting current programs and actions to produce more favorable outcomes. The process of strategic planning is rather complex and generally requires a large group of individuals work together to diverge and converge on a vision, mission, and core values (Segars and Grover, 1999). Research suggests these activities are critical for the advancement of a group task (Vreede, Fruhling, & Chakrapani, 2005). However, this type of group work is time consuming and it has been shown to be a slow and painful process (Chen, Hsu, Orwig, Hoopes, & Nunamaker Jr. 1994). It has also been shown that although strategic planning has become an essential part of university governance, college and university administrators have traditionally been reluctant to focus on systematic long-range change and instead have focused on day-to-day operations (Kotlerand Murphy 1981; Dooris, Kelley and Trainer, 2002).

The goal of this research is to use collaborative technology to streamline the process of strategic planning by developing and testing a repeatable collaborative process. Specifically, this research focuses on strategic planning in higher education by designing and facilitating a process to develop a strategic plan for an Information Systems (IS) department at a public university.

In the following sections, we present a short history of strategic planning, followed by a discussion of strategic planning in higher education. Next, we discuss how collaborative technology can facilitate the strategic planning process and present the theoretical basis for the research. Following that we discuss the research approach and process design and report the research results. Finally, we discuss implications for theory and practice and discuss future research.

Background

Strategic Planning

Mintzberg (1994, p. 107) maintains that strategic planning emerged as a formal methodology in the mid-60s when "corporate leaders embraced it as 'the one best way' to devise and implement strategies that would enhance the competitiveness of each business unit." Others associate the advent of strategic planning with the unstable economic environment of the 1970s when the 'energy crisis' and other unforeseen events caused organizations to seek out a more reliable way to plan (Rosenberg and Schewe, 1985). Today, the focus of strategic planning is on setting long-term organizational goals, developing and implementing plans to achieve goals, and allocating necessary resources to realize goals.

O'Regan and Ghobadian (2002, p. 664) emphasize that strategic planning is about gaining competitive advantage in that its purpose is to enable a firm "to gain as efficiently as possible, a sustainable edge over its competitors." However, strategic planning is expensive, risky and sometimes fails in its objectives. In discussing "the dark side of strategic planning" in universities, Paris (2003, p. 7) points out that bringing people together is expensive. It requires the acquisition of a meeting place, facilitators, food costs, travel expenses, and time away from usual duties. She cautions that it also calls for fresh, bold approaches that break through barriers and threaten some of the constituents of an institution. However, Rosenberg and Schewe (1985) reported that only 10% of strategic planning efforts are successful due to defects in the planning process, separation of planners from operators and resistant organizational culture. Jurinski (1993) adds that strategic planning efforts fail typically because of underestimated required amounts of time, effort and money by the organizations undertaking the strategic planning exercise. Despite these difficulties, strategic planning has been a long-standing and highly valued component of the management toolbox. According to Rigsby & Bilodeau (2011) "strategic planning and vision and mission statements are time-tested tools that have rated in the top 10 for usage over the years, regardless of the economic climate" (p. 9).

Strategic Planning in Higher Education

Around the time strategic planning was emerging as a structured management discipline, the environment for higher education began to experience notable fluctuations in demographics, economics, and technology. As colleges and universities began to take a closer look at strategic management, Keller (1983) released a pivotal publication on the management revolution in American higher education. In it, he highlights the need to develop a conscious academic strategy as an appropriate response to this turbulent environment:

> "The dogma of colleges as amiable, anarchic, self-correcting collectives of scholars with a small contingent of dignified caretakers at the unavoidable business edge is crumbling. A new era of conscious academic strategy is being born. The modern college and university scene is one that is no longer so fiercely disdainful of sound economics and financial planning or so derisive of strategic management. Professors and campus administrators are now uniting to design plans, programs, priorities, and expenditures in order to insure their futures and to keep American higher education among the world's best" (pp. viii-ix).

Over the years, interest in strategic planning within higher education has continued to grow and in 1998 the Council for Higher Education Accreditation's Recognition Standards included its first expectation of "evidence of policies and procedures that stress planning and implementing strategies for change" (Council for Higher Education, 1998). In their review of research on strategic planning in higher education, Dooris, et al. (2002, p.9) conclude that "empirical evidence about whether strategic planning does or does not work in higher education is less than conclusive" and caution that, "harsh as the criticisms appear, they are largely targeted at poor practices that impede creative planning, and the critics, as noted, often offer stories of both failure and success." Sanaghan and Hinton (2013) support these findings, citing both successful strategic planning endeavors and the continued resistance to strategic planning. In documenting strategic planning processes that often result in too many campuses failing to achieve their original planning goals, they stress the importance of connecting colleagues across the campus in the development of a shared vision and a shared plan. They suggest this be accomplished by connecting the strategic planning process with its constituents: in multiple modes (e.g., face-to-face and

electronically) to gather robust feedback and support; across the broader institutional landscape; with daily operations; realistic goals with shared aspirations, and, by measuring and valuing 'what we do with what' on campus.

Strategic planning continues to be an important topic to address within higher education, as it faces, once again, enormous challenges as a result of higher education requiring stricter reporting on assessment of effort outcomes (Shah, 2013). In a recent study of campus leaders and faculty, Delpino (2013) emphasizes higher education strategic planning is a 'people process' that is "not a solitary activity but one that involves a number of players. Its success depends on the individuals and groups who participate in the plan's development, application, and evaluation." Advice on conducting successful strategic planning in academic institutions is also provided by Voorhees (2008), who claims "a strategic plan that does not make use of data verges on propaganda" and advocates institutional research as a tool to produce qualitative and quantitative data as evidence of efforts to assess outcomes. While other studies have included strategic planning development in an academic setting (e.g., McDonald & McDonald, 1999), the current study attempts to address recommendations from previous research by conducting institutional research into the strategic planning process and improving connectedness in the collaborative process to increase the likelihood of active participation and participant satisfaction. While, the current study focuses on an IS department, a goal of this work is that the collaborative process could be adopted in other areas of higher education.

Collaborative Technology to Facilitate Strategic Planning

A collaborative tool that has emerged to facilitate connectedness and collaboration in organizations is the group support system (GSS). Introduced in the early 80s by DeSanctis and Gallupe (1985) as a group decision support system, the tool consists of software, technology, people and procedures to encourage active participation of all meeting participants. The simultaneous and anonymous communication supported by a GSS have been shown to improve meeting efficiency and encourage more open and honest communication within the meeting (Nunamaker, Dennis, Valacich, Vogel and George 1991). Various reviews of use of collaborative tools (such as GSS) by many different types of organizations to improve various aspects of business decision-making have documented their utility in large and small groups (Bobbert & Mulder 2013; Vreede, Vogel, Kolfschoten & Wien 2003; Fjermestad & Hilz 2000). In fact, GSS have even been used for strategic planning (Orwig, Chen, Vogel, & Nunamaker, 1996). However, previous research has shown that users will discontinue use of collaboration tools if they feel dissatisfied with the process, even when they feel they have been more productive within the meeting (Briggs, Vreede & Reinig, 2003; Reinig, Briggs, Shepherd, Yen & Nunamaker 1996). This would suggest that while utility of a collaboration tool is important, meeting participant satisfaction and individual goal attainment are equally important. A number of researchers have reported on meeting satisfaction, but none of have fully explained the mixed results that have emerged. Reinig (2003), addressed this void by developing the Goal Attainment Model of Meeting Satisfaction which subsequently evolved into the Satisfaction Attainment Theory (SAT), a model of meeting satisfaction (Briggs, et al. 2003; Reinig, Briggs & Vreede 2009).

Meeting Satisfaction Theory

The theoretical underpinnings of this research are based on the meeting satisfaction model derived by Reinig, et al. (2009). They suggest that in complex collaborative efforts, such as strategic planning, systems design or project development, "success or failure is seldom realized in a single collaboration effort, and the probability or likelihood of success is fluid throughout the duration of the project, sometimes increasing and decreasing along the way" (p. 64). They measure the likelihood of goal attainment (LGA) and its relationship to satisfaction with meeting process and outcome. These constructs are particularly germane to the area of strategic planning in higher education institutions where resistance to the process is high. Their 14-item instrument consists of five 'satisfaction with processes and five 'satisfaction with outcome' items and four items to measure 'change in LGA'. The survey was tested on 387 knowledge workers in the U.S. and Holland. Results showed that perceived change in LGA predicted satisfaction in both meeting process and meeting outcome. It would therefore appear to be a valid and reliable instrument to measure meeting satisfaction (process and outcome) and likelihood of goal attainment in a complex environment. Following Reinig, et al. (2009), Figure 1 shows the research model used to measure meeting satisfaction with process and outcome in the current study.

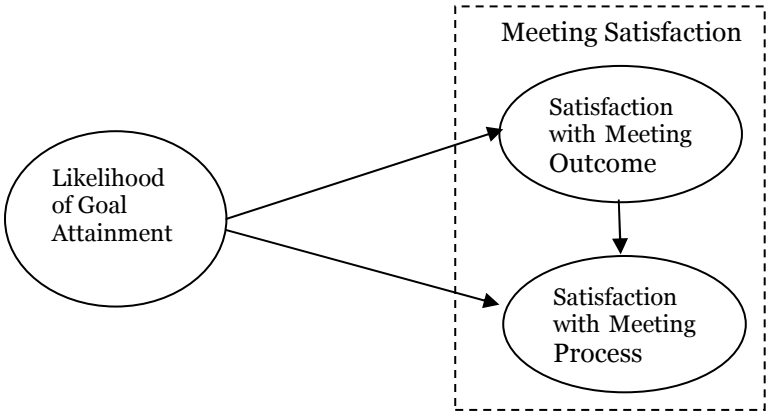

Figure 1. Research Model

Research Approach

Technology

To accomplish the research goal, the facilitation software offered by Facilitate Express[1] was chosen. The software is an online solution that allows facilitators to create an agenda including brainstorming, categorizing, and voting tools) and invite participants to join a synchronous meeting. Participants can be face-to-face or dispersed geographically. For this study participants were face-to-face, however their comments were anonymous.

Participants

Thirteen faculty members of the academic IS department in a medium-sized public U.S. university participated in the strategic planning meeting. The researchers acted as observers and participants in the meeting. Both researchers were members of the strategic planning committee of the IS department and as such were actively engaged in creating the vision, mission, and core values for the department. During the full faculty meeting, one researcher facilitated the group activities within the meeting and one researcher operated the collaborative tool and individually assisted participants in the operation of the tool, as needed. Researchers also acted as participants in each of the brainstorming activities discussed in the process design. Neither of the researchers completed the closing survey.

Data Collection

Both qualitative and quantitative data were collected. Quantitative data were collected by administration of the 14-item survey, mentioned above, consisting of three multi-item constructs: likelihood of goal attainment (LGA); satisfaction with meeting process (SP) and satisfaction with meeting outcome (SO) (Briggs, et al., 2003; Reinig, et al. 2009). All constructs were measured on a 7-point Likert scale. LGA was measured from 1=less likely to 7 = most likely. SO and SP were measured from 1= very strongly disagree to 7= very strongly agree. Demographics were also included in the survey. The survey was administered at the conclusion of the 2-hour meeting using Facilitate Express. Qualitative data were collected in three ways: (1) by soliciting feedback to open-ended questions at the end of the survey; (2) through researchers' observations of the meeting process and (3) in follow-up meetings with the department chair and the strategic planning committee. All of these data points inform the results of this research.

Process Design

In Fall 2013, the IS department strategic planning committee (a smaller group of the full department) met to discuss strategic planning options. At this meeting, it became clear that while it was important to a craft

[1] http://facilitate.com/technology/facilitate-express/

a vision, mission and set of core values with input from all members of the department, faculty members had little time to commit to the strategic planning process. A consensus was reached within the meeting that every effort should be made to engage faculty members for a maximum of two hours. Two members of the strategic planning committee who were trained meeting facilitators agreed to take on the challenge and developed the collaborative process that is the focus of this research. The four step process that was designed is shown in Figure 2.

Process (Steps 1-4):

1. Develop and facilitate a 2-hour faculty meeting using collaborative technology to:

   Use Facilitate Express software to capture ideas generated during 3 separate brainstorming sessions, and

   Discuss, refine and prioritize ideas for inclusion in a vision statement, mission statement and core values.

2. Meet with Department Chair to produce a final list of high priority words and phrases for inclusion in a vision statement, mission statement and core values.
3. Take results to Strategic Planning Committee to 'wordsmith' a proposed vision statement, mission statement and core values.
4. Present statements and values to all faculty members at a department meeting or post on IS Collaboration Space for faculty validation.

Figure 2. Collaborative Process Overview

During Step 1 of the process (2-hour facilitated meeting), the facilitators presented a brief five minute background on strategic planning including handouts and examples of department vision, mission, and core values. Then, participants were engaged in five brainstorming activities. The Step 1 meeting agenda presented to participants in Facilitate Express is shown in Figure 3, and the activities/outcome and time spent within each agenda item are shown in Table 1.

Figure 3. Facilitate Express Agenda

Table 1. Step 1 Activities, Outcomes and Time Spent

Agenda Item	Activity/Outcome	Time Spent
1. Warm Up	Familiarize participants with operation of Facilitate Express to create a more relaxed atmosphere in the meeting room. Address any questions relating to capabilities and operation of Facilitate Express.	5 minutes
2. Vision	Faculty members brainstormed 60 individual items In response to the question, "What are the goals we are trying to achieve as a department?"	20 minutes
	Facilitators walked participants through the creation of eight categories that were representative of the 'brainstormed' items: (1) culture; (2) reputation; (3) student focus; (4) career preparation; (5) industry relations; (6) global focus; (7) research focus, and (8) curriculum innovation/continuous improvement.	5 minutes
	Sixty items were moved into the appropriate category and prioritized by voting.	10 minutes
3. Mission	Faculty members generated 55 items in response to the question, "What are we trying to achieve and how do we aim to achieve it?	20 minutes
	Six categories were identified: (1) brand recognition and reputation; (2) culture; (3) curriculum review; (4) faculty-student engagement; (5) internships/jobs/employer engagement, and (6) pedagogy/ teaching techniques.	5 minutes
	Fifty-five items were moved into the appropriate category and prioritized by voting.	10 minutes
4. Core Values	Faculty members generated 55 items in response to the question, "What are the values that should guide our work if we are to make a contribution to our proposed vision?	20 minutes
	Four categories were identified: (1) collaboration; (2) corporate outreach; (3) culture, and (4) curriculum/pedagogy.	5 minutes
	Fifty-five items were moved into the appropriate category and prioritized by voting.	10 minutes
5. Closing	Participants completed the 14-item survey and responded to the question, "Please comment on the usefulness of the results/outcomes of today's session."	5 minutes

Following Step 1 (the full faculty brainstorming), Step 2 addressed priority identification and Step 3 involved word-smithing in smaller groups. Step 4 focused on a full faculty approval/vote. The findings from each step are discussed in the following section.

Research Results

Step 1: Survey data and qualitative comments collected indicated participants were much more productive than they imagined and were highly satisfied with the process and outcomes of the collaborative process. Results of the survey are discussed next, followed by a discussion of the qualitative comments and observations of the researchers on their satisfaction with the meeting process and outcomes.

The 14-item survey was completed by nine of the 11 meeting participants. The survey sample consists of two lecturers, three assistant professors, one associate professor and three professors. Of these, five were

tenured and four were untenured. There were six males and three females. Four of the respondents were 55+, four were 45-54 and one was 25-34 years of age.

Since the sample was not large enough to satisfy the requirements of more complex data techniques, data analysis was limited to reporting means, standard deviations and composite reliability of the three constructs (Kramer and Rosenthal, 1999, pp. 64-65). Table 2 shows high levels of satisfaction with meeting process (x=6.56, SD .71), satisfaction with meeting outcome (x=6.11, SD 1.10) and somewhat lower levels of likelihood of goal attainment (x-5.14, SD 1.30). These findings are very encouraging relative to the development of the collaborative process to facilitate strategic planning within a university.

Table 2. Survey Constructs (n=9)

Construct	No. of Items	Mean	S.D.	Composite Reliability
Likelihood Of Goal Attainment	**4**	**5.14**	**1.30**	**.77**
The meeting made it (less/more) likely that I would attain something I want.		5.56	1.24	
Because of the meeting, I am (less/more) likely to succeed on something I care about.		5.56	1.33	
I am (less/more) likely to attain my goals because of this meeting.		4.56	2.24	
Due to this meeting I am (less/more) likely to get what I want.		4.89	1.83	
Satisfaction With Meeting Process	**5**	**6.56**	**.71**	**.94**
I feel satisfied with the way in which today's meeting was conducted.		6.78	.44	
I feel good about today's meeting process.		6.56	1.01	
I liked the way the meeting progressed today.		6.33	1.12	
I feel satisfied with the procedures used in today's meeting.		6.56	.73	
I feel satisfied about the way we carried out the activities in today's meeting.		6.56	.73	
Satisfaction With Meeting Outcome	**5**	**6.11**	**1.10**	**.91**
I liked the outcome of today's meeting.		5.78	1.92	
I feel satisfied with the things we achieved in today's meeting.		6.22	1.09	
When the meeting was over, I felt satisfied with the results.		6.33	1.12	
Our accomplishments today give me a feeling of satisfaction.		5.67	1.73	
I am happy with the results of today's meeting.		6.56	.53	

Throughout Step 1, the researchers observed that all eleven participants expressed strong interest in achieving the objectives of the meeting and participated actively with Facilitate Express. A review of the qualitative comments included positive statements related to meeting process, technology and facilitation. These positive comments further confirmed the success of Step 1 of the collaborative process. Comment excerpts are shown in Table 3.

Table 3. Qualitative Comments (n=11)

Process Related Comments	*"Excellent venue. This way everyone, not just the most outspoken, will have input."*
	"Major Time Saver – Outcomes, output without this software application / tool would have taken and endless number of hours in and endless number of meetings."
	"Allows for sharing of ideas (anonymously) which is great for all parties (tenure and non-tenure)."
Technology Related Comments	*"Technology was very supportive for successful collaboration"*
	"Neat technology. Would be great in a distributed working environment too."
Facilitation Related Comments	*"The meeting facilitators were fabulous!"*
	"Fantastic job. Thanks to both of you!"

Both the quantitative and qualitative results focus on Step 1 of the collaboration process. While the full faculty meeting is an important part of the process, there were still three more steps that needed to take place in order to reach the final vision, mission, and core value statements. Table 4 outlines the entire collaborative process.

Table 4. Collaborative Process Timeline

Date	Objective	Outcome	Interaction Type	N
10/2/13	Strategic Planning Committee (SPC) discusses way forward for strategic planning process	Approve 2-hr. facilitated faculty meeting to start process of creating V, M & C	F-T-F	6
11/8/13	**Step 1:** Conduct 2-hour facilitated faculty meeting using collaborative tool	All faculty members were present, engaged and enthusiastic about the process and its outcomes	F-T-F using collaborative tool	11 plus 2 researchers (2 faculty members on leave)
12/5/13	**Step 2:** Researchers meet F-T-F with Dept. Chair to produce final list of words/phrases	30-minute meeting to refine list of ideas generated in facilitated meeting	F-T-F	3
12/9/13	Draft of V, M&C posted on IS Collaboration Space on university course management system	Online feedback provided by faculty member on sabbatical prior to 12/11/14 meeting	Online	1
12/11/13	**Step 3:** Take results to SPC to wordsmith and approve final content of proposed V, M & C in F-T-F meeting	30-minute meeting gained consensus on final V, M & C	F-T-F	9
1/15/14	**Step 4:** Present V, M & C to all IS faculty members for validation and vote at department meeting	Approved V, M & C posted on Collaboration Space for discussion at 2/14 /14 faculty meeting	Online	6
2/14/14		Motion passed unanimously (10 minutes)	F-T-F	13

The remaining discussion presents the results from Steps 2 through 4 of the collaborative process.

Step 2: Following the facilitated meeting, the two facilitators/researchers met with the department chair. At this point, they decided to narrow down the results from the facilitation session to include only items with a prioritization score of .75 or greater. They felt a smaller number of meeting participants' 'most important' items would be easier to prioritize in developing the final Vision, Mission and Core Values. This activity produced 24 vision comments, 21 mission comments and 29 core value comments. Figure 4 shows an excerpt from this final .75 report (the title of the category/group is shown at the top of the table;

comments with a score lower than .75 were dropped from the report). One facilitator took the lead in drafting a vision, mission, and core values document that included the high priority comments and ideas from the final .75 report. Over email, the other facilitator and department chair reviewed and edited the initial draft. The three then met face-to-face to walk through the finalized draft to present to the strategic planning committee. The .75 report was revisited a number of times during this strategic plan drafting process. It was important that the high priority items from each category were included in the draft so that meeting participants would see that their input from the brainstorming session was included and the time spent during Step 1 was worthwhile. Once agreement was reached, by the department chair and the facilitators, a department strategic planning committee meeting was scheduled for final 'word-smithing' and approval.

Career Preparation				
		Low/Medium/High		
		Graphed Score	Score	Voters
6.	top recruiting destination		1.25	12
17.	Need to prepare students to learn throughout their career to stay current in changing industry		1.08	12
27.	Need to prepare the students not just for the careers of today, but those of tomorrow		1.08	12
5.	Prepare students for a range of career opportunities in the information systems field.		1.00	12
59.	Students that understand the integration of managerial and technical skills		0.91	12

Figure 4. Excerpt from Vision Section of the Final 75 Report

Step 3: In the final department strategic planning committee meeting, nine participants (including the two facilitators and the department chair) met for 30 minutes. All participants were provided with the .75 report and the proposed draft of the vision, mission, and core value statements. The discussion of the vision resulted in one word being removed. The mission was approved as is. Finally, two words were removed and three words added to the core values. Additionally, the numbered list of core values was changed to a bulleted list to remove any inference of prioritization/ranking and one additional statement was added. Meeting participants were enthusiastic and amazed by the speed of the process. One participant summed up the feelings of the strategic planning committee, "*A 30-minute sign off on the vision, mission, and values was amazing! This meeting could have been so painful and could have taken forever!!*"

Step 4: The strategic planning committee's approved vision, mission, and core values statements were posted online in the department's collaboration space for all faculty to review. Additionally, a handout was presented at an all faculty meeting for final sign off. The vote on the new statements was unanimously passed in under 10 minutes in a face-to-face department meeting.

Discussion and Conclusion

Strategic planning can be a slow and painful process due to the number of people that must work together to diverge and converge on a vision, mission, and set of core values. The primary goal of this research was to streamline strategic planning by developing and testing a repeatable, technology-supported, collaborative process in an academic department.

The final process developed in this research included four steps designed to create a vision, mission and core values for the IS department: 1) full faculty brainstorming, 2) priority identification, 3) word-smithing, and 4) faculty validation. The four-step collaborative process was a resounding success. It successfully addresses Mintzberg's (1994) admonition that "Planners shouldn't create strategies, but they can supply data, help managers think strategically, and program the vision." Participants were enthusiastic and actively involved. As a result, they demonstrated ownership of the process, time spent in

the process was minimal, satisfaction with both process and outcome was high and the group's goals were achieved. Previous research related to strategic planning has suggested the importance of measuring the success of strategic planning each year in order to see how the planning process can improve over time (Segars and Grover, 1993). The IS department, in this case, now has a repeatable strategic planning process it can use to revisit its' strategic plan as needed.

In relation to the meeting satisfaction theory used in this research, survey results indicate strong support for the reliability of the survey items proposed by Reinig, et al. (2009), although the sample size was too small to determine extent of relationships with satisfaction of process or outcome with likelihood of goal attainment.

There are limitations from this research due to the use of only one university department and the small sample size. However, future research should test this process in other types of departments or academic settings (e.g., university planning).

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