

Construction Industry Awards

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This paper presents information regarding national construction awards, provides an on-line national construction awards database, and recommends how to improve the image of the construction industry using construction awards. The study shows that the U.S. construction industry may be able to improve its image by marketing construction awards more efficiently through their organization's webpage. The results of the study are at <http://www.constructionawards.org/> posted on a special website. The researchers collected data using construction industry websites and used this data to create a database of construction awards. The study began with a spreadsheet of 50 awards. A review of this data followed, and the scope of the study was expanded to include all construction awards available in the industry. The researchers continue to collect data for additional awards and these are being posted to the website. Two national organizations: the National Center for Construction Education and Research (NCCER) and the National Academy of Construction (NAC), served as Industry Advisors.

Key Words: Construction Awards, Internet, Data, Database

Scope

This study determines how many awards are currently presented in the construction industry and involves determining what kind of awards are offered, determining recipients who receive the awards, and assessing the potential impact awards can have on the image of the construction industry. The goal of the study was to develop expertise on all construction awards available as well as the entire award process so informed decisions can be made concerning positive development of the construction industry's image. Other objectives included:

- Compiling a database of construction awards.
- Creating an awards' web site.
- Suggesting a correlation of awards to construction industry image.
- Finding ways for awards to improve the construction industry.

The Internet provides a unique opportunity to study this issue, compile the results in an orderly and effective manner, and to share the results on a worldwide platform. Furthermore, the Internet allows for immediate and timely updates to the compile data, providing a "real time" opportunity to market the industry in a positive and uplifting way.

Professional construction organizations can better the image of the industry. Bodapati, S. Narayan & Naney, Dawn (2001) write "In order to create and promote a professional atmosphere, those employed in the industry should increase their participation in construction societies and organizations... Various professional organizations have formed over the past several decades that are aimed at advancing construction practices and improving the construction process... by participating in these professional organizations, construction professionals can realize increased pride and accomplishment and can promote the construction industry..."

The image of the industry can be affected through modern technology such as the Internet. Orth (2000) states "Construction professionals are using the Internet, intranet, e-mail, company web sites, and web-based project management software to communicate with other construction professionals and to conduct daily business... The internet is providing all construction professionals with new opportunities and it appears many are taking advantage of it in all types of work performed."

Also Schexnayder & Wiezel state (1999) “It is expected that future construction industry personnel will have more direct interactions with the World Wide Web and thus the web will be one of the best places to market products and services.”

Literature Search

This study began with a search for articles on construction awards in two major construction journals. Searches in the *American Society of Civil Engineering Journal of Construction Engineering and Management* and the *Associated Schools of Construction Proceedings* produced no articles or papers relating to construction awards. Search results primarily returned articles dealing with construction contracts being awarded. Some articles were found on the use of the Internet in the construction industry. These articles proved useful and have been cited throughout the paper.

Chronological Description of Project

The first step in the research process was to establish communication channels. A research team was compiled and weekly meetings were held to give direction to the project. The team consisted of the following:

Team Member	Role
Dr. Bill Badger	Leader
Mr. Spence Rich	Primary Researcher
Mr. Matthew Eicher	Technology Support
Dr. Husan Devalcu	Information Support, Professor Computer Science
Dr. Avi Wiezel	Information Support, Professor Construction

During weekly brainstorming meetings the idea to create an initial database of approximately 50 awards using generally accepted industry organization websites as the sources of information was presented and agreed to by the research team. This process allowed the team to develop a prototype that was used as the project grew. Important lessons were learned and solutions to problems implemented before significant time and resources were expended to compile a comprehensive database.

Once the initial data was collected, the next step was to create a functional database. The primary challenge was determining what information to use in the matrix. Other organizations have also struggled with the issue of deciding what information to present via the web. Wiezel, Chasey, & Schexnayder (2001) state “Construction organizations have begun to realize the need for a web presence and are questioning what information should be and should not be on the web.” In time, the information below was selected for presentation in a matrix form with the following headings:

1. **A Category** (grouping) field showing the type of awards (i.e. Student awards, Project awards, Company or Organization, Educator, and Professionals).
2. A shortened list of the **Names of the Awards**.
3. A hidden **Description** paragraph describing the award.
4. Award **sponsor** with link to their web site home page.
5. **Number of awards** issued annually.
6. **Entry fees** required to be nominated.
7. **Cash value** of the award, if any.
8. Whether **Membership** in the sponsor’s professional society is required.
9. **Last Award Recipient** to receive award.

The next step was to publish the initial results on a website. The team chose and purchased the domain name **constructionawards.org** and proceeded to create the website. The first attempt to create a functioning website failed. The initial plan was to host the information on local servers and link the information stored on the servers to the domain name. However, the data on the servers was stored deep within an existing website and linking from a web domain could only be accomplished to another home page. This forced the purchase of web hosting capabilities on an external server which enabled the team to link **constructionawards.org** to the data stored deep

within the local website. This approach was successful. The website initially included a brief description of the project and a second webpage containing the database also included links to the project sponsors.

Wiesel, Chasey, & Schexnayder (1999) provided information on means for measuring whether website objectives were being met: “One way to develop quantitative data is to use counters. Service providers are capable of providing reports addressing traffic origination, peak traffic hours, how many visits are unique or repeat how visitors navigated through the site. Such information will enable the company to analyze patterns.” To date no counters have been used. However, this capability will likely be included in the near future.

Wiesel, Chasey, & Schexnayder (1999) also recommended that similar domain names be acquired: “This would allow users to easily reach the site on simple guesses. Further it would prevent other organizations with similar organizational abbreviated names from acquiring domains with similar names. It is recommended to register the web site with leading search engines once every three months.” The project team has acquired a second domain name “nationalconstructionawards.org” and our website is registered with the top 200 search engines.

Analysis of Data

The research team sought award-process information that potentially improved the image of the construction industry. Early in the study the question was proposed: would people “play the game” better if someone kept score? Would construction organizations market their awards, recognize award recipients, and make construction award information more visible if someone or some agency was keeping score and reporting? Would these web users respond by changing their approach?

As the database took shape various analyses were performed based on the questions posed above. The first study targeted the Associated Schools of Construction (ASC) Rocky Mountain Region Schools to determine the level of award information on university web sites and whether they had recognized their recipients as expressed in the chart below.

ASC Rocky Mountain Region

Member School	Awards Listed On Web	Past Recipients Listed	Number of Clicks Needed	Total Score
Arizona State University	yes	yes	84	16
Boise State University	no			0
Brigham Young University	no			0
Brigham Young University – Idaho	yes	no	21	54
Colorado State University	yes	no	45	30
Montana State University	yes	yes	138	0
Northern Arizona University	no			0
University of Denver	yes	no	154	0
University Nevada Las Vegas	no			0
University of New Mexico	yes	no	10	65
Weber State University	yes	no	50	25

Schools were scored on a 100-point system, where a score of 100 meant the award and the most recent recipient of the award were listed on the website, and that the number of clicks to get to this information was one. Number of clicks equals the maximum amount of clicks from the home page, which exhausts all possibilities before you get to the desired location. For each click the school was docked one point. The school was docked 25 points if they did not list the most recent recipient. If the schools did not post any awards on their website they did not get a score. A **yes** under **Awards Listed on Web** means that at least some awards were listed on the website but does not mean the awards listed were a complete list. The following table is the scores for the ASC schools in the Rocky Mountain Region. Similar data has been collected for each ASC region and can be found by visiting our website at www.constructionawards.org.

A second sampling used to judge industry on its presentation of awards was taken from Construction Industry Institute (CII) members. After analyzing 13 owners' companies and 12 construction companies from CII, it was found these entities did not post construction awards on their websites. Whether or not they offer construction awards is another issue but they do not market them using the Internet. Some entities do have awards that they sponsor on their website but they are not construction related.

Construction Industry Institute Awards Research on 25 Owners/Contractors

Name	Member Category	Award Listed on Website	Website
Abbot Laborites	Owner	No	http://abbott.com/
AZCO	Contractor	No	http://www.azco-inc.com/
Bechtel	Contractor	No	http://www.bechtel.com/
Butler Manufacturing Company	Contractor	No	http://www.buttermfg.com/
Citgo Petroleum Corporation	Owner	No	http://www.citgo.com/Home.jsp
Conoco Phillips	Owner	No	http://www.conocophillips.com/
DuPont	Owner	No	http://www.conocophillips.com/
Fluor Daniel	Contractor	No	http://www.fluor.com/index.asp
General Motors Corporation	Owner	No	http://www.gm.com/flash_homepage/
Graycor	Contractor	No	http://www.graycor.com/
Honeywell International	Contractor	No	http://www.honeywell.com/
Intel Corporation	Owner	No	http://www.intel.com/
Johnson Controls	Contractor	No	http://www.jci.com/
Kiewit	Contractor	No	http://www.kiewit.com/
Nasa	Owner	No	http://www.nasa.gov/
Petrobras	Owner	No	http://www2.petrobras.com.br/ingles/index.asp
Primavera Systems	Contractor	No	http://www.primavera.com/
Siemens Westinghouse	Contractor	No	http://www.siemenswestinghouse.com/en/index.cfm
Smithsonian Institute	Owner	No	http://www.si.edu/
Solutia	Owner	No	http://www.solutia.com/pages/corporate/
Technip USA Corporation	Contractor	No	http://www.technip.com/english/index.html
Tennessee Valley Authority	Owner	No	http://www.tva.gov/
U.S. Steel	Owner	No	http://www.ussteel.com/corp/index.htm
Williams Group International	Contractor	No	http://www.wmsgrpintl.com/intro.htm
Zurich North America	Contractor	No	http://www.zurichna.com/

Discussion

When is it appropriate to encourage organizations to create new awards? The time and energy to create, identify, select, and give an award is significant and may exceed the return on investment of using this resource to market existing awards. For example, during an awards briefing to the NAC, the NAC board considered creating the top 25 awards issued nationally by others and marketing this information instead of creating their own NAC award. In order to create new awards some type of prototype or model should be used to help determine how to go about the process.

A fairly common “award issuing model” developed by the authors and used by some committees include the following steps:

1. Determining the award's objective;
2. Developing the award's criteria;
3. Creating a data collection mechanism;
4. Collecting the information about the potential recipient;
5. Reviewing, screening, and verifying the data;
6. Selecting, notifying, and awarding the candidate;
7. Determining follow-on publicity.

Most award processes are resource intensive and extremely sensitive. The information is about people; the process is about ranking, comparing, and selection in a very public forum. For example, when the concept to select the most outstanding National Construction Management graduates was presented, the first comment was "the danger of being perceived as picking one university over another". In this professional's mind, this concern outweighed the benefits of the positive publicity for the Construction Industry if such an award were presented.

Award sensitivity may be a significant barrier to issuing awards. The issuing organizations may perceive themselves to be in a risk position by being proactive in issuing awards. In discussions about award systems, numerous comments led the research team to become aware of some of the sensitivities and concerns.

1. What if not being selected hurt someone's feelings?
2. What if the information about these candidates is confidential?
3. What if the information is not correct?
4. What if it causes competition between members?
5. What if only big companies receive awards?
6. What if all the candidates are qualified?
7. What if none of the candidates are qualified?
8. What if there are not enough candidates in the pool?
9. What if candidates' nominated once, who do not make it, are reluctant to be nominated a second time?
10. What if the award recipient later in life is found not to be what as are represented?

It became evident that establishing award processes is difficult and managing them is time consuming, sensitive, and resource intense. The "What if group" has an unlimited number of concerns potentially presenting barriers to establishing awards. On the other hand, the organizations risk little if they do not have an awards program.

Many organizations would be at a loss if an award program were not in place. For example, the Beavers were formed in 1955 to honor worthy individuals in the heavy construction industry - somewhat like the "Oscars" of the movie industry. Woods (2002) the executive director of the Beavers stated, "that awards are the reason we exist."

If culture is risk avoidance but awards prove to be important, then extensive planning is needed to design the award process.

Case Study – "Top 25 Awards Sub Study"

This planning was organized in a sub study being performed by the project group. The goal was to establish a selection process of the top 25 awards to post on the website. With such a large grouping of national awards, it made sense to establish an "honors list" of construction awards. One question asked was whether it made more sense to actually rank these awards from 1 to 25 or just collect a grouping of the top 25 with no specific ranking. However, the problem was determining the criteria for including an award in this list.

In order to help determine criteria for choosing the top awards, the project team arbitrarily compiled a list of the top awards that was sent to key industry representatives. These representatives were asked to choose the top 25 awards out of this list using criteria such as recognition, size of sponsor organization, longevity, dollar value, exclusiveness, and industry awareness. The team asked for additional suggestions on criteria using the above list as only suggestions. Any award missing from the list, which a representative felt worthy of recognition, was asked to be included. Additional criteria could include the way recipients are nominated, the typical age or background of the recipient, and whether the award goes to a project, a company, or an individual. Using their respective criteria, it is

expected each representative will recommend the top 25 awards. From this feedback a “consensus” of the top 25 can then be chosen based on specific criteria.

The feedback from these representatives is in the process of being received and the consensus of the top 25 will be posted to the website. Once the top 25 awards are identified, specific ranking from 1 to 25 may be included. Determination of whether to list the top 25 as a group or as a ranking has not been reached. If ranking is chosen, the ranking of these awards would be based on the industry’s perception of which award is most prestigious compared to the other top 25 awards.

This activity is an example of the process an organization must go through to establish an award. In this specific case it was a listing of awards but the same principles apply. The process of establishing this list of awards has been extremely difficult. It is like comparing apples to oranges. The top awards to one professional are not the top awards to another. Awards are all different based on category, longevity, etc. Also the “consensus” of the top 25 is not set and will change over time. The real challenge is comparing such a diverse population of awards. Issues such as this must be addressed in deciding to support and issue an award.

A sampling of the “current” top 25 awards is as follows:

1. “Contractor of the Year” awarded by ABC
2. “Founders Award Recipient” awarded by NAE
3. The “General Carroll H. Dunn Award of Excellence” awarded by CII
4. “SIR’ Award awarded by AGC
5. “Engineering News Record Man of Year Award” awarded by ENR
6. “Golden Beaver Award” (for category – Management, Supervision, Engineering, Service and Supply) from the Heavy Engineering Construction Association <http://www.thebeavers.org/>
7. “Craft Professional of the Year” awarded by ABC
8. “Outstanding Achievement in Construction Awards” awarded by the Moles Organization
9. The 10 inductees annually selected to the National Academy of Construction
10. “Charles Pankow Award for Innovation” awarded by CERF
11. “Edward C. Kemper Award” awarded by AIA
12. “Excellence in Partnering” awarded by AGC
13. “Engineering Education Excellence Award” awarded by NSPE
14. “Free Enterprise Award of the Year” awarded by ABC
15. “Gold Medal Award” awarded by AIA
16. “Honorary Membership Award” awarded by AIA
17. “John P. Trimmer Award for Excellence in Teaching” awarded by ABC
18. “National Craft Training Awards” awarded by AGC
19. “National Teaching Award” awarded by ASC
20. “Outstanding Educator Award” awarded by ASC
21. “Victor Smith Professional Constructor Award” awarded by AIC
22. “W.A. Klingler Construction Education Award” awarded by AIC
23. “Outstanding Women Constructor Award” awarded by Arizona State University and National Association of Women in Construction
24. “Walter A. Nashert, Sr. Constructor Award” awarded by AIC
25. “Whitney M. Young Jr., Award” awarded by AIA

Results

As the database began to take shape, it became apparent that the process of placing the correct information onto a database would be complicated. The question became what kind of information needs to be displayed. A secondary but important question was how much data needed to be included. Mass amounts of data would likely be useful in determining the final database matrix format and for future unknown activities. However, too much information would be cumbersome and probably not user friendly. Thinking in terms of the end user, the researchers determined the database would be no larger than one desktop computer screen in width. This determination required hard decisions about what information to include. As described above nine fields were

included and grouped into four categories. This information was posted to the website at www.constructionawards.org Updates and changes to the website are ongoing.

As searching for construction awards began, the first source of information was the internet. It was hoped this source would provide the majority of information on construction awards. It became apparent, however, that some organizations did not publish their awards via the Internet. Because not all member of the construction industry subscribe to the internet platform, it may make sense to include in our study awards that are not listed on the internet. Many important construction organizations such as the Moles, which presents an award for Outstanding Achievement in Construction, do not use the internet at all. While this lack of technological foresight may detract from the image of the industry, the fact that such an organization exists and offers outstanding awards is an obvious enhancement to the industry.

A possible solution to the issue of organizations not marketing awards via the internet could be to establish a line of communication from the project team to key industry representatives. The team could request through the industry leaders that trade organizations market all construction awards via the Internet. Of course, these award organizations might desire to retain their exclusivity.

Some awards are buried deep in the sponsor's website and the award information is difficult to find. Assuming awards can raise the image of an industry, marketing of these awards should be given full attention. It was recognized each website designer must rate the importance of information in the design of the website. This results in some information being more difficult to find than most because the perceived most relevant information is the most readily available. As the study shows, some sponsors do not place high priority on construction awards, which is why awards are buried deep within the website. As a remedy, it was suggested an industry link be established between the project team and key industry leaders to request construction awards be given priority on sponsors' websites and moved closer to the homepage on each site.

As the study progressed, it became apparent that benchmarking would be necessary to effectively measure construction award information improvement. This was done by collecting information for one period in preparation for comparing it against a subsequent period. During the interim, the research team established contact between each website manager by email or letter, verified the award information, and suggested changes. For this project, benchmarking information has been collected and after sufficient time and communication between the project team and each specific Webmaster, a second data sampling will take place. This information will be compared against the first data sampling. It is anticipated that by keeping score, website managers in the industry will market awards information more efficiently on their sites.

Future Direction

This paper has been a summary of the entire study to date. Throughout the study it became evident there are many specific areas that could be and need to be expanded upon. Many of these areas have been considered but have not been completely addressed. These areas include:

1. Informing the industry that awards are not being adequately marketed on Internet websites.
2. Determining whether professional organizations do a better job of marketing awards than private companies.
3. Continuing to study the effects of scorekeeping.
4. Studying organizational processes of mass amounts of data via the web and other sources.
5. Studying more thoroughly the use of the Internet to continue to identify barriers.
6. Determining the methodology required for adding additional awards.
7. Establishing a "click count" metric to "find" each award on industry websites.
8. Collecting the remaining awards data from sources other than the Internet.
9. Defining award demographics.
10. Identifying specific gaps and overlaps in award selection to determine if awards are grouped toward owners, contractors, craft-workers, older or young participants, or towards other variables not yet identified.
11. Determining how best to maintain websites.
12. Establishing how best to keep websites user friendly, and easily maintained.

Conclusion

In conclusion, the researchers believe marketing construction awards on industry websites would improve the image of the industry. Currently however, the industry is not marketing awards efficiently, if at all. The researcher's sense that as this information is made available to the respective organizations, changes will be made. For example, the researcher's organization, the Del E. Webb School of Construction at Arizona State University, has incorporated major changes to its website due to the knowledge gained in this study. Until the change, this website required 84 clicks before construction award data was found. Now the reformatted home page allows users to reach awards after one click. Additionally, past award recipients are listed, and this greatly enhances the marketing aspect of these awards and adds a qualitative breadth to the organization itself.

Construction awards are an important tool for improving the image of the construction industry. However, the real potential of industry awards will not be realized without extensive marketing. The use of websites as a marketing tool needs enhancement, and some entity needs to keep score so universities, professional organizations, and companies are adequately maintaining their websites. The researchers believe the benefits of marketing awards are numerous and well worth the effort.

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