Introduction

A CMMS software package maintains a computer database of information about an organization’s maintenance operations. This information is intended to help maintenance workers do their jobs more effectively and to help management make informed decisions (for example, calculating the cost of maintenance for each piece of equipment used by the organization, possibly leading to better allocation of resources). The information is also useful when dealing with third parties; if, for example, an organization is involved in a liability case, the data in a CMMS database can serve as evidence that proper safety maintenance has been performed.

Computerized Maintenance Management Systems are increasingly being used to manage and control plant and equipment maintenance in modern manufacturing and service industries. This view of the selection and implementation process can assist those who are considering CMMS for the first time, to decide their requirements.

CMMS packages may be used by any organization that must perform maintenance on equipment and property. Some CMMS products focus on particular industry sectors (e.g. the maintenance of vehicle fleets or health care facilities). Other products aim to be more general. To identify CMMS vendors, search for CMMS using any Internet search engine.

Different CMMS packages offer a wide range of capabilities and cover a correspondingly wide range of prices. A typical package deals with some or all of the following:

- Work orders: Scheduling jobs, assigning personnel, reserving materials, recording costs, and tracking relevant information such as the cause of the problem (if any), downtime involved (if any), and recommendations for future action
- Preventive maintenance (PM): Keeping track of PM inspections and jobs, including step-by-step instructions or check-lists, lists of materials required, and other pertinent details. Typically, the CMMS schedules PM jobs automatically based on schedules and/or meter readings. Different software packages use different techniques for reporting when a job should be performed.
- Asset management: Recording data about equipment and property including specifications, warranty information, service contracts, spare parts, purchase date, expected lifetime, and anything else that might be of help to management or maintenance workers.
Inventory control: Management of spare parts, tools, and other materials including the reservation of materials for particular jobs, recording where materials are stored, determining when more materials should be purchased, tracking shipment receipts, and taking inventory.

CMMS packages can produce status reports and documents giving details or summaries of maintenance activities.
Industry Trends

During the past few years, there have been fewer entrants into the CMMS/EAM vendor world, along with tremendous consolidation. Many of the companies acquiring CMMS/EAM vendors are looking to expand their product and service offerings, such as large ERP, plant automation and specialty software companies. These are signs of a maturing market. From the customer’s perspective, this can be good news if product and service offerings are improved and better differentiated. Additionally, the companies that survive a period of consolidation tend to be more financially stable. However, with fewer competitors and more differentiated product and service offerings, there may be reduced pressure on vendors to negotiate prices.

Major trends, issues and drivers in the EAM/CMMS software market include:

- Consolidation is continuing in the EAM / CMMS software market. Vendors are all chasing the same customers and there is a limit to how many vendors it can support.
- Mobile computing for EAM / CMMS has become a mainstream offering.
- Virtually all vendors offer ASP solutions for EAM / CMMS systems as well as licensed software.
- Vendors are pursuing ancillary services because of the limited money available from licenses and connection fees.
- The purchase of an EAM / CMMS system is usually driven by the need to reduce costs, regulatory actions, fines and/or safety.
- The number one problem with CMMS programs is that users still do not understand how to fully utilize their CMMS or have the expertise to implement it properly.

Industry consolidation

Besides the expected consolidation among CMMS vendors themselves, many large enterprise resource planning (ERP) vendors have either significantly improved their CMMS software modules or acquired a CMMS vendor. In my opinion, this is because ERP vendors view improved asset management as one of the last big opportunities to deliver significant ROI across the enterprise.

Large plant automation companies also have been acquiring, investing or forming strong alliances with CMMS vendors. This appears to be driven by the realization that improved interface with shop-floor data collection provides maintenance departments with better information, allowing them to react more quickly to asset failure or sub-optimal performance.
Pricing

Although recent economic conditions have ensured there remains a healthy level of competition at every price point, from under $1,000 to several million, it’s becoming increasingly difficult for users to shop prices. This is, in part, because of the open architecture described earlier. Comparison shopping is further complicated by the fact that vendors bundle and define their options and features differently.

The global market for EAM software reached $1.6 billion in 2003 and is estimated to grow at the Cumulative Annual Growth Rate (CAGR) of 3.1 percent reaching $1.9 billion in 2007. The U.S. market in 2001 was $617.6 million and is expected to reach $743.8 billion by 2006 with a CAGR of 3.8%. Growth in this market will not stem from purchases of additional software licenses, but from services that focus on making the software work.

The CMMS Survey

In August of 2007, APPA informed its member institutions of a survey on CMMS programs conducted by a private market research firm. As a result, a selection of the survey results are included in this report and provided to participants and other interested parties. However, the provision of this report to APPA members or through APPA’s resources should not be construed as an endorsement of any kind of the survey results or of the market research firm. In addition, APPA accepts no responsibility for the accuracy of the information in this report.

Thanks to all who took the time to participate.
TYPE OF RESPONDENTS

1. What best describes your position in your institution?

59.20% of the respondents were Facilities Directors and department heads. 16.20% of respondents did not disclose their designations. 11.70% were technicians and housekeeping staff. 10.60% of the respondents were technology managers/directors. 9.50% were business or finance officers and 8.90% were maintenance and facilities secretaries.

2. LOCATION OF THE INSTITUTIONS

We had a wide range of participation from every state and from the international community, including several Canadian provinces. Participation rates were highest in Texas, Massachusetts, Pennsylvania, California and Nevada.
TYPE OF INSTITUTIONS

3. What category best describes your institution?

25.10% of the institutions were baccalaureate or private institutions. 24.60% of the respondents were from doctoral or research institutions. 18.60% of the institutions were associates followed by 17.10% baccalaureate or public institutions. Only 14.60% of the institutions were at the master’s level.

STUDENTS STRENGTH

4. What is your current student full-time enrollment?

18.40% of the respondents answered that their total student strength was somewhere from 1000-4999, this was followed by 16.40% of the institutions who had a student strength of 10,000 - 14,999. 15.40% of institutions had a student size of 5000 - 9999. There were only 10% of the institutions who had a student strength of 20,000 - 29,999. 9% of the respondents said that they have a student size of 30,000 or more. 7% had a student strength of 15,000 - 19,999, and only 5.50% of the institutions had a student strength of less than 1000.
**TOTAL SIZE OF THE CAMPUS**

5. What is the estimated total gross square feet supported by the Facilities department across all campuses?

29.50% of the institutions had 1,000,000 – 2,499,999 square feet of space, followed by 16.80% of the respondents that had 500,000 – 999,999 square feet and 2,500,000 – 4,999,999 square feet available respectively. 9% had total gross square feet of 250,000 – 499,999 available. 8.40% of the institutions had more than 10,000,000 square feet available. 5.80% of the institutions had 100,000 – 249,999 square feet and 5,000,000 – 7,499,999 square feet of total space available. 5.30% of the institutions had 7,500,000 – 9,999,999 square feet of space available. Only 1.60% of the respondent size had 50,000 – 99,999 square feet and 1.10% of the total sample size had less than 49,999 square feet available.
6-7. What primary Computerized Maintenance Management System (CMMS) is currently in use at your campus?

SchoolDude is the first choice for the institutions among all other CMMS vendors available as their CMMS vendors. The second position is taken by TMA Systems, closely followed by Maximus.
Thirty-two respondents have selected the following vendors for their CMMS solution. A few of them are listed below:

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<th>Vendor</th>
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<td>Champs</td>
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<td>Baywood Technologies</td>
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**TYPE OF MODULE**

8. What modules do you currently own and use?

64.5% of the respondents use the Space Management module but the module is only used 35.5% of the time. 60% of the institutions use the Fleet Management module and the usage rate is 40%.
The Inventory module was used by 58.2% of the respondents but the usage rate was only 41.8%. 57.9% of the other institutions were using other modules whose usage was only 42.1%. The Capital Planning module was owned by 56.5% of the respondents and the usage rate was 43.5%. Utility Tracking and Dorm Management modules were owned by 54.5% of the respondents and the usage rate was only 45.5%. Another 53.8% of the institutions owned the Preventive Maintenance module and the usage rate was 46.2%. The Maintenance module was owned by 50.4% of the respondents and the usage rate was very high compared to other modules at 49.6%. The BAS integration module was owned and used by 50% of the respondents.

**INFLUENCE OF CAMPUS ACCOUNTING SYSTEM**

9. To what extent was your current CMMS package selection influenced by your campus accounting system?

53.10% of the respondents said that they were not influenced by their campus accounting system. 15.20% of the respondents were to some extent influenced by their accounting system with the selection of their CMMS package. 12.20% of the respondents felt that their accounting office was involved to a great extent in selecting the software. However, 4.30% of the total sample size said that their campus accounting system was the primary influencer in selecting the CMMS package.
INTEGRATION OF CMMS WITH CAMPUS ACCOUNTING SYSTEM

10. Is your CMMS system integrated with your campus accounting system?

44.0% of the respondents do not want to integrate both the systems together, whereas 15.10% of the total respondents said they are currently working on integrating both the systems. 13.80% of the respondents replied back by saying that they would like to have the integration happen whereas another 13.80% of the respondents answered that they have integrated the system without any problems. 6.90% of the respondents said that the integration was not supported by their vendors. 6.30% of the respondents said that they have fully integrated the system but they have difficulties maintaining it. 5.00% of the respondents said that the cost is high compared with the benefits they receive out of it and only 2.50% of the respondents tried the integration but could not get it implemented.
LAST PURCHASE OF CMMS

11. How long has it been since your organization purchased your current CMMS?

34.97% of the respondents bought the CMMS system 2-5 years ago. 26.38% of the users bought the system 5-10 years ago. 19.63% of the total respondents bought the system around 1-2 years ago. There were 11.04% of the users who bought the system more than 10 years ago and 9.82% who bought the CMMS system less than a year ago. However, a total of 3.07% of the total respondents specified different time periods outside of the time ranges given.

PREVIOUS CMMS ON BOARD

12. What system did your campus previously use?
The graph above reflects that in-house systems held a predominant percentage of the market share at a certain point in the past with 24.12% falling into this category. The paper-based system represented 21.18% of the total respondents. The survey also shows that a large number (15.88%) of users are new to the concept of CMMS and previously did not have any system in use. In the ‘Others’ category (15.29%), the primary choice is the CHIEF, representing 13.1% of the total 15.29% of respondents in this category.

**TYPES OF ORGANIZATIONAL DEPARTMENTS**

13-14. What organizational departments are you supporting with this system?
Facility Department Support of Campuses

15. How many campuses does your facility department support?

59.39% of the respondents support only one campus, 9.70% support three campuses, 4.85% support four campuses, 4.24% support both five and six campuses and 1.52% support two campuses.
LEVEL OF SATISFACTION
16. Please rate your overall satisfaction level with your current system.
35.90% of the respondents are satisfied with their current system. 29.30% of the respondents are very satisfied; and 16.20% of the respondents are extremely satisfied with the current system in place. 13.80% of current system users are not satisfied and 4.80% are extremely disappointed with their current system.

VALUE ADDITION FROM CMMS
17. How would you rate the value that your organization and campus have received from your total investment in a CMMS?
31.50% received measurable value from their CMMS investment. 21.20% received outstanding value from it, 27.30% commensurate to investment value, 9.10% believed it exceeded the current value; 10.90% are in the process of implementing the CMMS and nobody thought that the CMMS greatly outweighed the value for the investment initially made.
LEVEL OF NEEDS ADDRESSED BY CMMS

18. To what degree do you feel that your CMMS system addresses the facility department needs of your campus?

Out of 206 respondents, 41 respondents skipped the question and 165 answered the question. 45.50% of the respondents believed that the system had met most of their key requirements. 17.60% of the respondents felt that the CMMS system met many of their core requirements. 14.60% of the respondents believed their CMMS system met their minimum requirements and 13.30% of the respondents felt that it exceeded the requirements of the campus. Only 9.10% of the total respondents who answered the question believed that their CMMS system met less than minimum requirements.
19. Are you currently tracking Inventory within your CMMS?

A majority of 42% of the respondents responded by stating that they are tracking inventory within their CMMS system, whereas 38.20% of the respondents were not tracking the inventory. 12.10% of the respondents were tracking the inventory system in another system and only 7.60% of the institutions were tracking it in the accounting system.
20. Do you envision having your CMMS system extended to your suppliers and contractor organizations?

A majority of the respondents (80.90%) did not have a plan to extend the CMMS system to their supplier and contractor organizations, whereas 14.70% of the respondents are in the planning process of recommending it to their suppliers and only 4.50% of the respondents have already started the initiative.
21. To what degree are your faculty and staff entering their own requests into your CMMS?

43.10% of the respondents answered that CMMS systems were used by limited faculty and staff whereas 21.90% of the respondents said that all the staff and faculty were using the CMMS system to enter their request. 15.20% of the respondents said that all the staff, faculty and students were using the system and 19.90% of the respondents said that the system was not used by anybody.
Q22. Does your senior administration and staff have access to your CMMS for reporting and summary information?

51.70% of the respondents said the CMMS system was accessible to all the senior administration and the staff whereas 48.30% of the respondents said that the CMMS system was not accessible to the senior administration and staff.
23. What is your plan for going paperless? (check all that apply)

- 25.80% of the respondents said it’s a long-term objective for them to go paperless, whereas 19.90% of the respondents said that they want to go paperless within the next three months.
- 17.20% of the respondents are planning to go paperless within the next eighteen months.
- 12.60% of the respondents have no plans presently to go paperless whereas 8.60% of the respondents want to be paperless and are in the process of implementing the same at their institution.
USE OF WEB BROWSER FOR PLACING REQUESTS

Q24. Are work requests currently being submitted through a web-browser interface at your campus?

Currently 67.60% of the respondents are implementing the web browser interface and 11.50% of the respondents plan to implement the interface within the next eighteen months. 10.10% of the users are implementing the interface this year. It was a long term objective for 6.10% of the respondents, whereas 4.70% of the respondents plan to implement the interface within the next three years.
TECHNICAL ABILITY OF THE STAFF

Q25. Can your maintenance supervisors and workers currently access, approve, and close out work orders via a wireless device?

20.30% of the respondents plan to implement a wireless device within the next three years. 19.60% of the respondents said that they have no plans as of now and another 19.60% of the respondents believed it was a long term objective. 19.00% of the respondents said that they are currently implementing the system, whereas 15.70% of the respondents are in the process of implementing it in the next eighteen months. Only 5.90% of the respondents are implementing the process this year.

WIRELESS PROVIDER FOR CELLPHONES Q26-27. Who does your campus use as a wireless provider for cell phones? (check all that apply)

Part (A)

51.20% of wireless providers on campus were Sprint/Nextel followed by Verizon with 37.80%. AT&T/ Cingular had a total share of 26.80% as a wireless provider on campus. Only 11.40% used Alltel as a campus wireless provider for cell phones.
36.36% of the respondents had no specifications for such a provider. 18.18% of the respondents used Manitoba telecom systems followed by 13.64% of respondents using US Cellular and another 13.64% using Rodgers. 9.09% of respondents used Telus whereas Unice, T-mobile, Bell and Sasktel were chosen by 4.55% of the respondents respectively.

**PERCENTAGE OF WIRELESS DEVICE USED**

**Q28. What percentage of your maintenance technicians uses a wireless device for work orders?**

78.30% of the respondents said that technicians were not using wireless devices for their work orders. 7.20% of the respondents said that their technicians were using the wireless device 100% of the time for work orders. However, 6.60% of the respondents said that only 25% of their technicians were using the device for work orders. 4.00% of the respondents said that 50% of their technicians were using it for work orders and another 4.00% of the respondents said that 75% of their technicians were using a wireless device for their work orders.
ESTIMATION OF POTENTIAL INCREASE IN PRODUCTIVITY

Q29. What is your estimate of the potential productivity increase to be gained by having technicians work in a wireless mode of operation which is paperless?

46.80% of the respondents responded that there was a clear productivity gain of 25% after the introduction of wireless services. 24.80% felt there was a rise of 50% in productivity levels after the introduction. 13.50% of the respondents said there was no absolute gain after introduction of wireless systems, whereas 12.10% of the respondents felt there was a clear rise of 75.00% in the productivity level. Only 2.8% felt there was a 100% rise in productivity levels after using wireless devices.

FUTURE Q30. When do you envision all technicians in your department having a full-function wireless device?

39.60% of the respondents said that it will take at least 2-5 years for the integration, whereas 20.80% of the respondents said it would take 5-10 years for all technicians to go wireless. 20.10% of the total respondents said it will take at least 1-2 years to go wireless for all technicians. 14.80% of the total respondents cited alternate time frames for the integration, and only 3.40% of the total respondents responded that the implementation will take less than a year. 1.30% answered that it would take less than 6 months to integrate a wireless device.
CURRENTLY INSTALLED PROGRAMS

Q31. Which BAS brand(s) do you currently have installed? (Check all that apply)

51.10% of the total respondents have Johnson Controls installed, followed by Siemens at 36.50%. Honeywell was installed by 26.30% of the respondents followed closely by Trane at 24.10%. 23.40% of the respondents voted for other brands. 14.60% installed Automated Logic (ALS).

Only 8.80% of the respondents preferred TAC.
FUTURE PURCHASE OF BRANDS

Q32. Which BAS brand(s) are you most likely to purchase in the future? (Check all that apply)

Johnson controls once again was the most preferred BAS brand to be purchased in the future with 36.80% of the respondents going for it, followed by Siemens with 29.60%, 19.20% of the respondents wanted other vendors whereas 18.40% of the respondents opting for Honeywell corporation, 16.00% of the respondents going for TAC for repurchase whereas 14.00% of the respondents opting for Automated Logic (ALS) and 8.80% of the respondents going back to TAC for re-purchase.
Q33. Are you satisfied with the efficiency and accuracy of your existing BAS alarm notification process?

66.90% of the respondents were satisfied with the level of efficiency and accuracy of the existing BAS alarm notification. 17.30% of the respondents responded that there were too many nuisance alarms and 12.60% of the respondents said that the BAS system lacks accountability. 11.00% of the respondents feel that there should be adequate training for the BAS system. 3.90% of the respondents feel that the existing BAS alarm notification process is too complicated and 3.20% of the respondents cited other reasons.
Q34. How critical is it to your operation to automatically generate high priority work orders based on predefined BAS conditions if special consideration is taken for eliminating nuisance and repetitive conditions?

56.60% of the respondents said that they are interested in having this integration between BAS and CMMS, whereas 24.30% of the respondents felt that it is not an important feature for the campus. 8.80% of the respondents said that they had too many diverse BAS solutions to contemplate this capability however 5.90% of the respondents felt it is critical and they are planning to implement this functionality. Only 4.40% of the respondents have BAS automatically generating orders for CMMS.
IMPORTANCE OF AUTOMATIC GENERATION OF PM ORDERS

Q35. Is it important to your operation to automatically generate PM work orders based on real-time data from your BAS?

58.40% of the respondents said it is very important to automatically generate PM work orders based on real-time data whereas 41.60% of the respondents said it is not important at all.
EFFECT OF JCI ACQUISITION OF YORK

Q36. There is a major trend in the industry where BAS and HVAC equipment are becoming integrated based upon the JCI acquisition of York and the Carrier acquisition of ALS. How do you believe this will impact you?

- 30.40% of the respondents answered that their preference of selecting HVAC equipment and a BAS system was completely independent of each other.
- 42.40% of the respondents are expecting “smart” HVAC equipment to communicate with the BAS of their choice.
- 44.00% of the respondents are expecting “smart” HVAC equipment to be on the network and easily accessible to anyone they approve.
- 22.40% of the respondents were not that positive and they said that it will force them to buy a BAS vendor because of the HVAC equipment they select.
- 16.80% of the respondents are excited about the HVAC equipment that will be fully integrated with a control system.

44.00% of the respondents answered that their preference of selecting HVAC equipment and a BAS system was completely independent of each other whereas 42.40% of the respondents are expecting “smart” HVAC equipment to communicate with the BAS of their choice. 30.40% of the respondents are expecting “smart” HVAC equipment to be on the network and easily accessible to anyone they approve. However, 22.40% of the respondents were not that positive and they said that it will force them to buy a BAS vendor because of the HVAC equipment they select. Only 16.80% of the respondents are excited about the HVAC equipment that will be fully integrated with a control system.
Q37. Building automation systems have very limited functionality for scheduling after hours events or community use of facilities, typically limited to override schedules. Internet-based scheduling systems may now be integrated with BAS so that HVAC schedules are automatically updated.

50.00% of the respondents have not evaluated integrated facility scheduling; however 42.20% believe that the energy savings potential for integrated scheduling is very high. 39.10% of the respondents believe that customer satisfaction would greatly improve with integrated scheduling. 16.40% of the respondents plan to integrate facility scheduling with BAS and 11.70% of the respondents have already integrated the administrative scheduling system with BAS in all sites.
THE MEGATREND VIEW

Q38. There is a major trend in the industry to read energy meters real time and to take more management action on energy consumption/cost/real time. How do you view this mega trend?

41.60% of the respondents are planning to use BAS to get real time data in the near future, however 34.50% of the respondents feel that local utilities are making it easier to get electronic data. 31.90% of the respondents said that currently they are getting real time data via building automation systems. 15.90% of the respondents are using real time energy data now and saving money. 6.20% of the respondents said that local utilities are totally uncooperative with providing electronic data and 3.5% do not believe that real time energy data will lead to energy savings.
VIEWS TOWARDS THE FACILITY MANAGEMENT SYSTEM

Q39. What are your views towards your facility management solutions being delivered under the software as a service model where all you need is an internet connection and your password to access your system?

26.30% of the respondents are in a wait and see mode, followed by 24.10% of the respondents that have already implemented an SaaS system at their campus. 22.60% of the respondents need the facilities solution integrated with Enterprise software systems. 18.10% of the respondents are not sure about their views on this. 12.80% of the respondents are currently worried about security and the remaining 9.80% are planning to implement SaaS next year.
Q40. What are the primary benefits you see from Software as a service solution from the perspective of your campus facility management system needs?

64.30% of the respondents say they can access the system from anywhere and anytime. 55.60% respondents said the ease and speed of deployment will be more important. 49.27% respondents said that it facilitates connection to maintenance team, 47.80% of the respondents said it is easier to use however 46.00% feel that the overall cost is low. 36.90% of the respondents said that it will be a good facilitator between faculty and staff. 38.90% feel that it will increase flexibility and agility to support evolving facilities needs. 37.20% respondents said it will help in faster enhancements and maintenance updates. 27.00% respondents said it has a higher reliability. 25.40% feel that the Scalability for campus will go up. 20.60% take it as a predictable cost, however 19.10% said it had lower risk and rest didn’t answer the question.
Q41. Is your current vendor addressing this trend?

30.80% of the respondents agreed that the vendor was addressing the SAS Solution. 27.80% of the respondents said that they didn’t know. 22.60% of the respondents believed the vendor was not addressing the SAS Solution and 18.80% of the respondents felt that the SAS Solution was solved partially.

Q42. To what extent is your current CMMS vendor committed to and supports the higher education industry?

50.80% of the respondents feel that the vendors support the higher education system to a great degree. 25.80% of the respondents feel that the vendors do support higher education to some extent. However, 12.90% of the respondents said that the vendors are solely industry focused. 6.80% of the respondents believed their current CMMS vendor had very little commitment to the higher education system.
Q43. Which industry trade organizations do you currently participate and support?

69% of the institutions support APPA followed by 53.00% supporting other organizations. 12.00% of institutions support IFMA followed by 11.00% with SCUP, 9.00% with AHRAE and BOMA, 7.00% with AFE, 5.00% with NFPA, 4.00% with AIA, NACUBO, NPSE, 3.00% with AEE, CAPPA and USGBC and 6.00% do not support or participate with any organization.

Q44. Does your current CMMS vendor participate in your industry trade organizations?

51.70% of the respondents said that their vendor does participate to some degree in their trade organizations. 25.90% of the respondents said that their vendors do participate to a great degree. However, 11.20% of the respondents said that their vendors participated very little and the rest of the respondents (11.20%) said that their vendors do not take part in such trade organizations at all.
Q45. How often do you receive regular and substantial enhancement updates from your CMMS vendor?

29.90% of the respondents receive quarterly updates, followed by 23.90% who receive the CMMS updates annually. 20.50% of the respondents receive updates monthly and 16.20% of the respondents said that was not an important factor, while 9.40% of the respondents receive updates every other year.

Q46. How satisfied are you with your vendor support and services?

Installation support: 38.50% of the respondents are satisfied with the current system followed by 28.70% who are extremely satisfied. 18.00% of the respondents gave an average rating for support services. 9.00% of the respondents feel they provide fair services whereas only 5.70% feel they are receiving poor service support.

Training: 31.70% of the respondents are satisfied with the current system followed by 24.20% who are extremely satisfied.
21.70% of the respondents gave an average rating for training services. 10.80% of the respondents feel they provide fair services whereas 11.70% feel they receive poor support for training services.

**Service Desk:** 31.90% of the respondents are satisfied with the current system followed by 29.40% who are extremely satisfied. 21.00% of the respondents gave an average rating for service desk support services. 7.60% of the respondents feel they provide fair services whereas only 10.10% feel they are receiving poor service desk.

46 (b)

Respondents gave a rating of 2.54 for training followed by 2.37 for the service desk and 2.25 for installation support.
Q47. How would you rate the following CMMS vendors as meeting the requirements of higher education campuses in 2007?
Q48. How would you rate the complexity of your CMMS solution?

35.90% of the respondents said that their CMMS solution was just the right level of functionality versus complexity; however, 26.60% of the respondents said that the CMMS system was complex. 24.20% of the respondents thought that their CMMS was quite simple and straightforward. 9.40% of the users however said that the CMMS system was quite complex and intimidates the user, whereas only 3.90% of the users thought that it was overly simple.

Q49. How much training was required to become proficient on the use of your CMMS solution?

29.10% of the respondents said that they needed several hours of training for CMMS. 21.30% of the respondents replied back by saying that they required several days of training. 18.10% of the respondents said they would require several weeks of training classes. 16.50% of the respondents said they required one full week of training on their CMMS system. 15.00% of the respondents however said the training required was minimal, and the solution was intuitive.
Q50. To what extent do you rely on your campus IT organization to provide support for your CMMS solution?

34.60% of the respondents said that they need no support at all. 23.90% of the respondents felt that they needed very limited support; however 17.70% of the respondents felt they needed support to some degree. 15.40% of the respondents needed support to a great degree for the CMMS. Only 8.50% of the respondents are fully dependent on their IT organization.

Q51. Did you contract with a third party systems integrator to implement your CMMS solution?

80.80% of the respondents didn’t contract with a third party to implement their CMMS system. Only 19.20% of the respondents contracted with a third party to implement their CMMS system.
Q52. What resource level do you commit to in order to support and administer your current CMMS on an on-going basis?

28.90% of respondents required minimal administration resource requirements. 28.10% of the respondents needed 1 full-time equivalent resource (e.g. 40 hours per week). 15.60% of the respondents needed .5 full-time equivalent resources (e.g. 20 hours per week), and 10.20% of the respondents wanted .25 full-time equivalent resource (e.g. 10 hours per week). 10.20% of the respondents didn’t know and 4.70% of the respondents wanted less than 2 full-time equivalent resources. 2.30% of the total respondents wanted 2 full-time equivalent resources (e.g. 80 hours per week).

Q53. Would you prefer support for your CMMS solution from your central campus IT organization or from an external service provider?

55.60% of the respondents said that they would prefer support from their campus IT organization and 44.40% of respondents said they would prefer support from a third party for their CMMS system.
Q54. What are your preferences for development and delivery of your CMMS solution?

29.70% of the respondents said they preferred that the CMMS software be delivered through an internet service model, 25.40% of the respondents preferred that the software be implemented in-house through a facilities organization. 22.00% of the respondents preferred that the CMMS solution be installed in-house with 3rd party implementation and support services. 14.40% of the users preferred that the software package be implemented in-house by an IT organization. 8.50% of the institutions relied on their in-house solution developed by an IT organization.
Q55. What are the most critical and essential enhancements needed to meet the needs of your campus?

40.32% of the respondents said that the most critical and essential enhancements that need to be made are technological enhancements, 33.87% of the respondents said administrative enhancements were most critical, 19.35% said “Other” enhancements were most critical and 6.45% of the respondents said no enhancements were necessary.