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### Promoting Nonprofit Organisations' IT Enablement in Singapore

Projjal Ghatak  
*Accenture*

Guillaume Sachet  
*Accenture*

Jared Tham  
*Singapore Management University, jaredtham@smu.edu.sg*

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White Paper:  
Promoting Nonprofit Organisations' IT Enablement  
in Singapore

- 15<sup>th</sup> May 2009 -

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## AUTHORS

This white paper was prepared by:

- Projjal Ghatak (Accenture)
- Guillaume Sachet (Accenture)
- Jared Tham (Lien Centre for Social Innovation)

With contributions and reviews by:

- Robert Chew (Lien Centre for Social Innovation)
- Willie Cheng (Lien Centre for Social Innovation)

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- Jason Ng, Consultant, Research & Analysis, *iDA*
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- Lim Choon Ping, Senior Executive, Capability & Community Funding Department, Resource Allocation Division, *NCSS*
- Devi, Assistant Director, Community Partnerships, *NVPC*
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- Sharon Xiong, Business Development Manager, *OAK Systems Pte Ltd*
- David Tan, Asst Manager (Donor Management), *Methodist Welfare Services*
- Kyaw Pine, Founder, *Books to Read*
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All views in this paper reflect only those of the authors, and do not represent the views of those acknowledged.

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## Summary

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### *Setting the Context*

The **Lien Centre for Social Innovation** (the Lien Centre), a partnership between the Lien Foundation and Singapore Management University (SMU), was established to advance the thinking and capability of the not-for-profit sector.

The Lien Centre identified IT as a capability that can help the Non Profit Organisations (NPOs) improve their operations. **Accenture**, a global management consulting, technology services and outsourcing company, as part of its corporate citizenship, was asked by the Lien Centre to help assess the **IT enablement of the Nonprofit Sector in Singapore**.

### *A case for NPOs to improve their IT enablement*

The non profit landscape in Singapore is large and diverse, consisting of more than 1,800 registered charities and more than 500 approved Institutions of a Public Character (IPCs). These organisations vary in size from less than \$100,000 in annual receipts to those with over \$10 million in receipts. They also operate in over 10 sectors ranging from religion to education to sports.

These non profit organisations (NPOs) can be segmented by annual receipts as follows:

- Small NPO: less than \$100,000 (586 NPOs);
- Mid-range NPO: between \$100,000 and \$10,000,000 (1209 NPOs);
- Large NPO: more than \$10,000,000 (95 NPOs).

These organisations face several challenges in the current climate:

- New Environment
  - The need for improved accountability of operations from new regulatory compliance requirements
  - Better management of back-office functions and internal projects to be effective
- Sustainability of Donations and Subsidies
  - Effective communication with donors and improved fund raising appeals needed
  - The sustainability of donations especially due to the economic downturn
- Availability of good human capital

Many of these challenges can be better managed and better mitigated by the increased usage of information technology.

Through our discussions with NPO players and analysis of the market, we have classified the business IT needs of NPOs as follows:

- General organisational needs such as accounting, human resources and corporate communications;
- NPO specific needs such as donor management, gift / pledge management, volunteer management and logistics; and
- Sector specific needs such as care plan and patient case management for healthcare and parent / school management for education.

Based on our assessment of the NPO landscape, we believe these IT needs are not well served today for the small and mid-sized NPOs. Our discussions with observers and players

indicate that most of these NPOs use “desktop-based” solutions (e.g. Excel spreadsheets and PC-based accounting software) primarily for accounting and office communication, and little automation for other functions. Even the automated functions, relying on manual inputs have several issues:

- Administrative issues
- Version control and maintenance challenges
- Manual input errors
- Limited traceability
- Lack of resources for maintenance

It would appear that mid-range NPOs in general would benefit from greater automation of the full range of business functions.

### *Models of IT Enablement*

NPOs could consider the following four common models for enabling and deploying IT:

- In-sourcing;
- Outsourcing;
- Shared Services;
- Software as a Service (SaaS).

The first model is **in-sourcing** where individual organisations will buy off-the-shelf software or build customised applications in house. With this model, organisations will typically maintain their own IT capabilities and resources, with the associated functions of recruiting, developing and retaining IT personnel. The advantages of such a model include each organisation possessing control of its IT roadmap, having the ability to customise solutions to meet its needs and retaining control over its IT capabilities and resources.

However, for the mid-range NPOs, such a model is unlikely to be sustained as the NPOs will face increasing difficulty in attracting and retaining IT personnel given their relatively small size. NPOs also provide limited career options for such IT personnel.

The second model is **outsourcing**, where the organisations will buy its IT resources and support from an external IT services provider. This could provide the flexibility for nonprofits to customise the solutions desired, while reducing the requirement for trained IT personnel in-house.

However, this usually requires very careful management of the outsourcing contracts for the IT services to retain control and flexibility of the IT capabilities. Given the likely low level of knowledge and expertise internally in mid-range NPO, this too is challenging.

The third model is that of a **shared service**, where a shared service provider will provide support for selected back-office processes (e.g. financial accounting) and their related IT support (e.g. financial accounting software). The NPOs can then focus on their core functions and services while leveraging on the shared service provider to manage and operate the selected back-office functions.

The Charity Council with support of the Ministry of Community, Youth and Sports (MCYS) has recently started the process of developing such shared services for the accounting functions. A new charitable organisation, Binjai Tree started by SGX CEO Hsieh Fu Hua, also intends to provide shared accounting services to charities. Similarly, Singapore nursing homes are piloting a shared service platform for medical supplies.

The fourth model is that of **Software-as-a-Service (SaaS)**. SaaS has gained popularity in recent years in the commercial world with the improvements of web technology, internet connectivity and data security. A 2008 Access Market International Research showed that in the U.S. 78% of organisations are either using or considering SaaS.

One of the best known SaaS providers is Salesforce.com; locally, Food From The Heart uses Salesforce.com to help manage its scheduled food runs. SaaS uses transaction-based pricing and removes the need for upfront capital expenditure and for internal IT resources. Another example of SaaS platform for the Nonprofit sector is project IngoT, by Lien Foundation. It is a collaborative initiative to build an integrated and shared Healthcare Enterprise Resource Planning platform to support 11 healthcare nonprofit/non-government organisations in Singapore. The 11 organisations include the Home Nursing Foundation, HCA Hospice Care, National Kidney Foundation (NKF), Tsao Foundation, St. Luke's Hospital, Peacehaven Nursing Home, Singapore Cancer Society, Assisi Hospice, St. Joseph's Home, Renci Code 4 (home care) and TOUCH Home Care. The platform comprises the following modules: accounting, human resources management, financial and inventory management, volunteer management, donor management, patient administration, clinical management, management dashboard and electronic medical records.

The key benefits of SaaS to an NPO are:

- No installation and maintenance of software
- No maintenance and upgrade of server
- Subscription-based charging model (inclusive of support)
- Remote access to software
- Inclusive of security and redundancy layers

The commercial sector in Singapore, in particular the SMEs, have begun adopting SaaS as an alternative solution to reduce CAPEX (capital expenditure) investments and to provide on-demand, pay-per-use services at low cost. This trend will continue to develop, in particular with the recent Grid Market Hub initiative launched by iDA and plans to go live in 2013. This could be a model for the Nonprofit sector.

### *The SaaS Operating Model*

We believe that SaaS can be the most cost effective model in the long term for the delivery of IT services to non profit organisations. With the prevalence of internet communication, cheap and high bandwidth availability and the national initiatives such as national GRID network and rollout of SaaS for small and medium enterprises that can be leveraged, the introduction of SaaS for the nonprofit sector can be cost-effectively implemented.

To start, a single organisation can be appointed or established to be the SaaS bureau for nonprofits. This chosen organisation would identify and define the scope of IT services to be offered as SaaS.

We propose that the following three set of generic modules applicable to most NPOs could be considered, covering functionalities such as:

- Module 0 comprising data communications, document, spreadsheet and database management and web presence;
- Module 1 comprising managing donor databases, allocation of funds, gifts and pledges, and volunteer and logistic management;
- Module 2 comprising an enterprise resource planning (ERP) suite to manage financial accounting and reporting, inventory, human resources and payroll needs.

The selected organisation would identify SaaS partners and develop an ecosystem of SaaS solution providers, becoming an aggregator of SaaS solutions to NPOs, as illustrated in the diagram below.

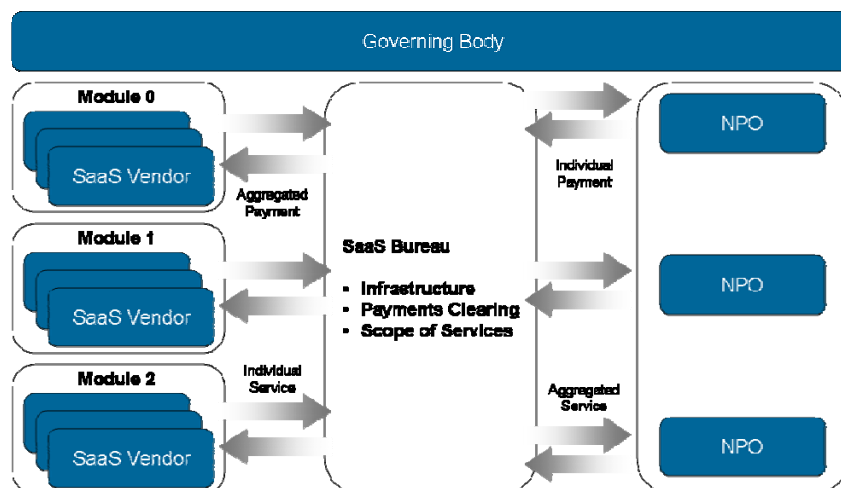


Figure 1. - SaaS Operating Model

Our proposed model of IT support is expected to benefit primarily the Mid-range NPO that is those NPOs with annual receipts of between \$100,000 and \$10,000,000. This segment alone has over 600 NPOs as potential users of the services offered, assuming that 50% of the NPOs in this segment are not well supported by IT today.

The Small NPO (with annual receipts of less than \$100,000) can probably be served by continuing with the use of desktop Office-type software applications like spreadsheets, office applications and even PC-based accounting software. At the other end of the continuum, the Large NPO would likely have invested in IT functions to support their needs. While we propose that the model discussed here targets Mid-range NPO, the services provided under this model would be available to all.

A pricing model for these services, as well as basic training to subscribe to these services will need to be developed. Determining the right price point for each SaaS solution is key to making these services affordable to Mid-range NPO. In order to determine the pricing model, a detailed study should be conducted to establish:

- The charging model for each module: this would involve the development and release of a Request for Information to selected vendors.
- The NPOs' capacity to pay for such services: this would require an understanding (through a comprehensive survey), by category of NPOs, of "how much they can pay" for IT related services.
- The gap between the charging fees and the NPO's capacity to pay in order to determine the required funding and subsidies.

We believe that the proposed SaaS model can provide a more affordable alternative to an in-house, outsourced or shared service model, strengthening the nonprofit sector's use of IT and enabling NPOs to be more cost efficient and productive.

### *Challenges and Opportunities to Implementing SaaS*

Implementing SaaS carries with it certain risks and opportunities.

The key risks and challenges are:

- **Pricing & Subsidies.** Cost and pricing are particularly sensitive in the nonprofit world. In general, SaaS is expected to be the most cost-effective model for Mid-range NPOs. Subsidies have often been used to accelerate take-up of services in any market. However, subsidies also distort the market. The present Shared Services



initiative by Charity Council/MCYS potentially subsidises vendors of shared services to the nonprofit organisations. Binjai Tree will likely also offer its shared accounting service at a discount to the charities. While this benefits the NPOs who take up the shared service offering, the subsidy could make shared service economically more attractive than SaaS unless the latter is also subsidized at a level to normalise the difference. We would therefore advise that the authorities (IDA and MCYS) coordinate their approaches and subsidies so that the take-up can be accelerated with discounts, without the markets being distorted relative to each other.

- **Scale.** With more than 1,200 mid-range NPO in Singapore, we believe that the Nonprofit sector offers a significant user base for SaaS at the correct price point. Yet, the model can only be successful if sufficient numbers of NPO adhere to the SaaS model as it would require upfront investments from the government and key agencies to set up the SaaS bureau.

The opportunity exists now for the implementation of SaaS. A live example of SaaS exists by way of the Lien Foundation's Project IngoT. Before there is widespread subsidised implementation of alternatives such as shared services, SaaS can be successful if it is scaled up quickly. This scaling up can be achieved if it is potentially done around the iDA's National Grid initiative. A SaaS bureau dedicated to the Nonprofit sector could be funded by Government (and relevant agencies). Recent developments around Open Source also offer an opportunity for cost-effective software development.

Overcoming the challenges and capturing the opportunities can allow Singapore to increase the automation of the sector and to uplift it.

## Appendix A – The NPO Landscape

### Introduction

The Nonprofit landscape in Singapore consisting of charities and Institutes of Public Character (IPCs) is large and diverse, both in terms of focus and size of organisations.

As of December 31, 2007 there were 1890 registered charities and 508 approved IPCs in Singapore based on the Commissioner of Charities Annual Report for the Year Ending December 31 2007.

These organisations operate in a variety of sectors:

- Religion
- Social Services
- Health
- Education
- Arts & Heritage
- Community & Youth
- Sports
- Others comprising Self Help, International NGOs, Environmental / Animal Welfare, Migrant Workers, etc.

The Commissioner of Charities Annual Report 2007 also provides a breakdown of the registered charities and IPCs by purpose as follows.<sup>1</sup>

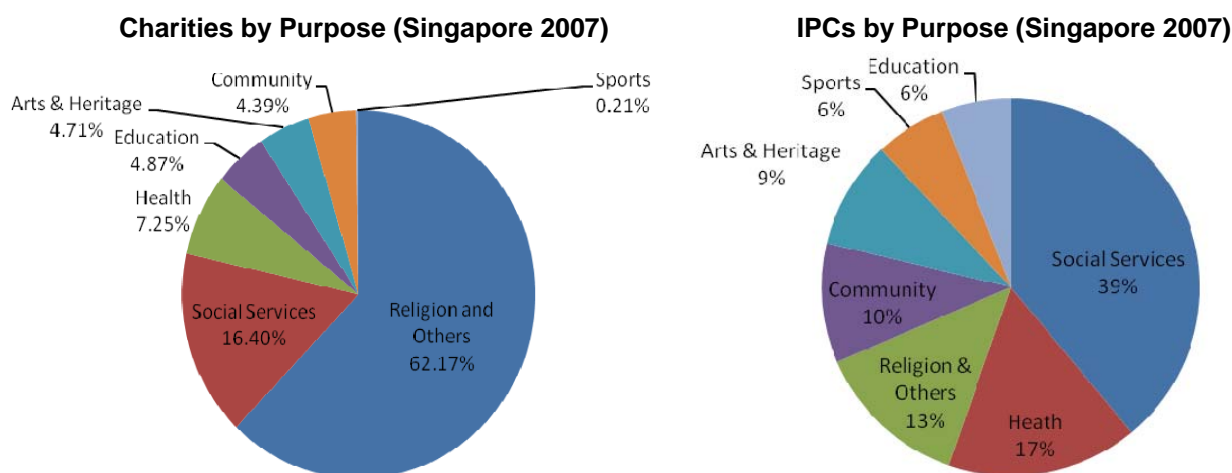


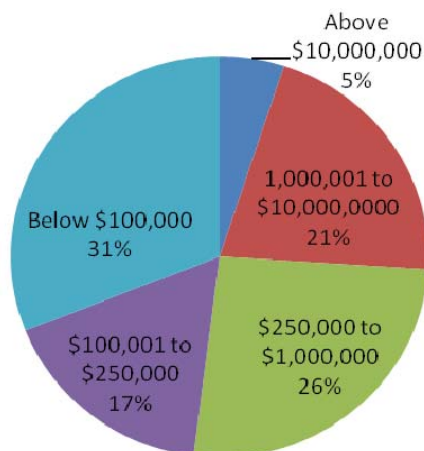
Figure 2. - the Non Profit Landscape (by purpose)

In terms of size, about half of the registered charities had annual incomes (including donations, income from services rendered and Government grants) of less than \$250,000. Of the sixty-five institutions that had incomes exceeding \$10 million they comprised mainly educational institutions, health institutions and religious organisations, accounting for 82% of the \$5.45 billion of total income received by all registered charities in 2006.

In terms of IPCs, the total donations received in 2007 stands at a figure of \$820 million, a 50% increase over 2006.

<sup>1</sup> Commissioner of Charities Annual Report for the Year Ending 2006

**Distribution of Charities  
by Annual Receipts in 2006**



**Distribution of IPC Tax  
Deductible Donations in 2007**

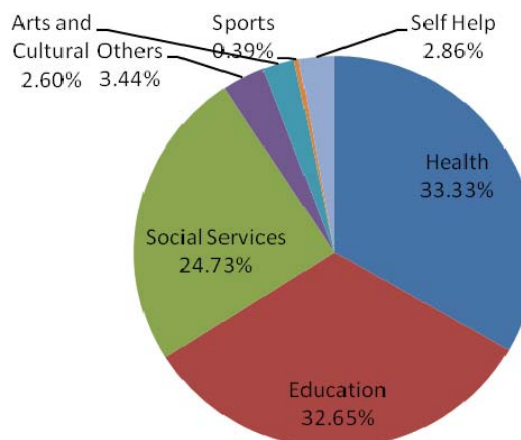


Figure 3. - the Non Profit Landscape (by receipt and donations)

Any framework employed by a governing body be it regulatory or capability enhancing cannot be “one-size-fits-all” and needs to incorporate the uniqueness that exists between different organisations in this space.

### Capability Building

Capability building of the nonprofit sector is undertaken by various agencies and nonprofit organisations. Key ones are described here.

The National Council of Social Services (NCSS) in Singapore which aims to provide leadership and direction in social services, and enhance the capabilities of social services organisations has been undertaking several initiatives recently to build the capabilities of the non profit sector in Singapore.

In 2007, close to 10,000 training places were provided by NCSS’ training arm, the Social Service Training Institute (SSTI) with 96% of course participants believing that course objectives had been met.<sup>2</sup>

NCSS also launched several new schemes and initiatives to help non profit organisations become cost efficient, including a shared audit services initiative following new regulations by the Commissioner of Charities, as well as IT maintenance / support, design and printing services at competitive rates.

The National Volunteer & Philanthropy Centre (NVPC) conducted a study in 2007 on issues faced by Institutes of Public Character in fundraising and volunteer management. NVPC also publicised methods which NPOs could use to encourage and facilitate regular donations and conducted 24 trainings on volunteer management and fundraising training. In the year 2007, NVPC awarded over \$400,000 in grants to new initiatives.

The Commissioner of Charities in Singapore set up a \$45 million VWOs-Charities Capability Fund in April 2007 to enhance the governance and management capabilities and Volunteer Welfare Organisations (VWOs) for 2007 - 2012. The goals of the fund were to alleviate the costs of capability building, improve governance standards and facilitate compliance of new regulations in the charity sector.

<sup>2</sup> Singapore Yearbook 2008, [http://www.sg/SG\\_Yrbook2008/CommunityDev.html](http://www.sg/SG_Yrbook2008/CommunityDev.html)

This trend is expected to continue as governing bodies of non profits and organisations in the industry in Singapore realise the importance of investing in capability building initiatives.

## *New Challenges*

### New Environment

Following the NKF case (2006) and the discovery that donor contributions were not being used for the right purposes and that, commercial products were promoted in lieu of donations and sponsorships, donors and regulatory authorities have begun to question the ultimate destination of funds received by nonprofit organisations. Findings of the Individual Giving Survey of 2008 suggest that donor confidence in nonprofit organisations has greatly improved after the sharp decline in 2006. However, to prevent future declines in donor confidence, greater transparency of operations would be important.

The Charities (Amendment) Act was introduced in March 2007, with new regulations to monitor the non-profit sector and give the Commissioner of Charities additional powers for more effective regulation of charities and protection of public interest.

Some of these regulation changes are as follows.

To ensure the authenticity of organisations registered as a charity, applications need to conform to the following:

- The purposes / objects of the institution must be exclusively charitable;
- The institution must have at least 3 trustees, of whom, at least 2 must be Singaporean citizens or permanent residents; and
- The purpose / objects of the institution must be beneficial wholly or substantially to the community in Singapore.

In terms of fund-raising activities, disclosures of public fund-raising appeals, use of donations and keeping of accounting records related to fund-raising were made mandatory. Charities in particular needed to ensure that expenses incurred on public fund-raising appeals in a particular year should not exceed 30% of total donations in that year. For every fund-raising activity raising \$1 million or more, charities need to disclose the total funds raised, fund-raising expenses incurred and planned use of funds raised. Commercial fund-raisers need to ensure that donations received must be made directly to the charities, individuals or organisations who engaged the fundraisers. Any payment made to commercial fund-raisers must be made separately.

There are additional regulations for large charities (total annual income of \$10 million or more for two consecutive previous years). They must have 10 charity trustees to ensure good representation of views, with charities having a time frame of 3 years from 1 May 2007 to ensure compliance. The charities will also need to seek approval from the Charities Unit / Sector Administrator if they wish to appoint external auditors. They would also need to change their auditors at least once every five years to ensure that a high professional standard is maintained.

In order to ensure compliance to all of the above, significant changes or enhancements would have to be made to how finance and accounting is done in non profit organisations, and in a lot cases require the implementation of finance and accounting systems.

## Sustainability of Donations and Subsidies

Given the economic situation, there is a fear that donations and contributions to nonprofit organisations may be on the decline. Research conducted by Prof. Paul G. Schervish and Prof. John J Havens at the Centre on Wealth and Philanthropy, Boston College predicted that individual giving in 2008 would decline by 3 – 4% and predicted a similar decline in 2009.<sup>3</sup>

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<sup>3</sup>“Giving in Today’s Economy: What Can We Expect”, Havens John J & Schervish, Paul G, Trusts & Estates, Vol. 148 Pages 42-45, January 2009

This coupled with the increases in number of nonprofit organisations and activities means that NPOs may have to share in a smaller donation pool. This would call for nonprofits to step up both fundraising efforts as well as communications with key stakeholder groups.

## Availability of Good Human Capital

The level of volunteerism in Singapore is considerably low at 16%, as compared to countries such as the USA and the UK where volunteerism levels stood at 26.2% and 59% respectively in 2007.<sup>4</sup> Irrespective of funding, nonprofit organisations require manpower to carry out their efforts, and attracting people to contribute either full-time or part-time can be a challenge.

Also the growing notion that volunteers are viewed as “free labour” to charities and nonprofit organisations adds to this issue. The lack of importance given to the non-economic value that volunteers bring, primarily in the form of engagement with the community, do not endear volunteers to charities. Volunteerism leads to higher donations, (volunteers who donate on average give four times more than non volunteers who donate)<sup>5</sup> therefore the lack of good volunteers can be adversely affect nonprofits financially through reduced donations as well as loss of free service.

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<sup>4</sup> Individual Giving Survey, 2008, National Volunteer and Philanthropy Centre

<sup>5</sup> Individual Giving Survey, 2008, National Volunteer and Philanthropy Centre

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## Appendix B – IT Enablement Models

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### *Introduction*

There are four models for IT-enablement of the nonprofit sector:

- insourcing
- outsourcing
- shared service
- software-as-a-service (SaaS)

### *In-Sourcing*

In-sourcing is where individual organisations will buy off-the-shelf software or build customised applications in house. With this model, organisations will typically maintain their own IT capabilities and resources, with the associated functions of recruiting, developing and retaining IT personnel.

In-sourcing provides the following benefits:

- **Direct Management:** companies usually opt for in-sourcing to maintain control over their IT initiatives, considering that they have a better in-depth knowledge of their own business and strategic direction.
- **Streamlined Process:** By maintaining their own IT development in-house means that no extra process is required to integrate and coordinate with a third party provider.
- **Security:** keeping IT in-house also limits the risk of a breach in the systems since no external party is given access to the organisation's IT environment.
- **"Peace of Mind":** in-sourcing means that the organisation does not need to assess the financial strength or health of a third party provider.

However, in-sourcing model also implies resources (i.e. staff, skill-set, expertise) and funding to manage and maintain the company's IT environment up-to-date. It means both CAPEX and OPEX (operating expenditure) investments.

For the nonprofit sector in Singapore, it would mean that each NPO is actually serving its IT needs in-house, dedicating resources and funding to IT.

### *Outsourcing*

Outsourcing is where the organisations will buy its IT resources and support from an external IT services provider. This could provide the flexibility for nonprofits to customise the solutions desired, while reducing the requirement for trained IT personnel in-house.

According to Accenture<sup>6</sup>, outsourcing provides the following benefits:

- Enhanced capabilities in key competitive areas
- Partnering with experts to increase innovation
- Increased ability to focus on core competencies
- Improved service quality
- Reduced costs
- Speed and time to market

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<sup>6</sup> Outsourcing for High Performance, Accenture, 2008

Accenture's research shows that nearly half of outsourcing buyers are value-driven. They want to improve business performance while increasing overall profitability. They believe that outsourcing is the way to accomplish those objectives. Nearly one out of five buyers look to outsourcing to do even more; to transform the way their business works, achieving rapid, sustainable step-change improvement in enterprise-level performance. Still two in five buyers look to outsourcing for more traditional benefits — to drive cost out while increasing scale and efficiencies.

The key success factor for outsourcing is usually choosing the right partner based on a set of pre-defined criteria:

- SLA (Service Level Agreement)
- Outsourcer track record and expertise
- Business case, e.g. potential cost savings, efficiencies
- Relationship

Outsourcing usually requires very careful management of the outsourcing contracts for the IT services to retain control and flexibility of the IT capabilities.

For the Nonprofit sector in Singapore, it would mean that each NPO is actually outsourcing its IT needs to a third party, dedicating resources and funding to managing the relationship.

### *Shared Services*

Here, a shared service provider will provide support for selected back-office processes (e.g. financial accounting) and their related IT support (e.g. financial accounting software).

In the commercial sector, Shared Services model means, for many organisations, the following:

- Centralising functions
- Standardising processes and systems
- Providing service to multiple operating units

Hence, Shared Service model is expected to provide the following top 5 benefits, according to an Accenture web-based poll<sup>7</sup>:

- Lower cost (77% of respondents)
- Accelerated transformation (63%)
- Consistent service delivery (57%)
- Shared enabling technology (47%)
- Shared leading practices (40%)

In addition, according to Accenture<sup>8</sup>, to be successful, a Shared Services model must:

- Enhance customer focus
- Create a supplier-buyer
- Increase transparency for costs and services
- Establish shared accountability for end-to-end process performance

For the Nonprofit sector in Singapore, it would mean that each NPO is actually connecting to a Shared Service entity, serving its IT needs on an SLA basis based on a pre-defined process split between the NPO and the Shared Service entity.

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<sup>7</sup> The State of Shared Services, Dan London, Accenture, 2008

<sup>8</sup> Beyond Centralization: Driving High Performance Through Fully Realized Shared Services, Accenture, 2007

## *SaaS*

Software-as-a-Service (SaaS) has gained popularity in recent years in the commercial world with the improvements of web technology, internet connectivity and data security. A 2008 AMR Research showed that in the U.S. 78% of organisations are either using or considering SaaS.

Accenture defines Software as a Service (SaaS, typically pronounced 'sass') as “a model of software deployment where an application is hosted as a service provided to customers across the Internet.” By eliminating the need to install and run the application on the customer's own computer, SaaS alleviates the customer's burden of software maintenance, ongoing operation, and support. Conversely, customers relinquish control over software versions or changing requirements; moreover, costs to use the service become a continuous expense, rather than a single expense at time of purchase. Using SaaS also can conceivably reduce that up-front expense of software purchases, through less costly, on-demand pricing. SaaS lets software vendors control and limit use, prohibits copies and distribution, and control all derivative versions of their software. This centralized control often allows the vendor to establish an ongoing revenue stream. The SaaS software vendor may host the application on its own web server, or this function may be handled by a third-party application service provider (ASP). This way, end users may reduce their investment on server hardware too.

Keys Principles of a SaaS solution are that:

- Software deployed as a hosted service and made accessible to the user over the internet
- Unlike traditional packaged applications that users install on their computers or servers, SaaS vendors own the software and run it on computers in their data centre. The customer does not own the software but effectively rents it, usually for a monthly fee
- SaaS solutions are normally capable of supporting of variety of single and multi-tenant deployments, providing various levels of client isolation<sup>9</sup>

The key benefits of SaaS to an NPO are:

- No installation and maintenance of software
- No maintenance and upgrade of server
- Subscription-based charging model (inclusive of support)
- Remote access to software
- Inclusive of security and redundancy layers

For the Nonprofit sector in Singapore, it would mean that each NPO is actually connecting to a third party through the internet in order to access the SaaS services. Provided that the price point is right, it can provide a strong IT enablement platform for the NPO.

SaaS is further analysed in Appendix C.

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<sup>9</sup> Accenture, SaaS Practice Website



## Appendix C – SaaS Framework

### *Introduction*

This appendix sets out a framework by which SaaS could be implemented for nonprofits, and an analysis of how implementable it is based on the example set out by the commercial sector.

### *IT Architecture Overview*

In order to establish a model for IT enablement, it is important to understand the needs of these organisations. We see the following categories of needs – clustered into SaaS modules:

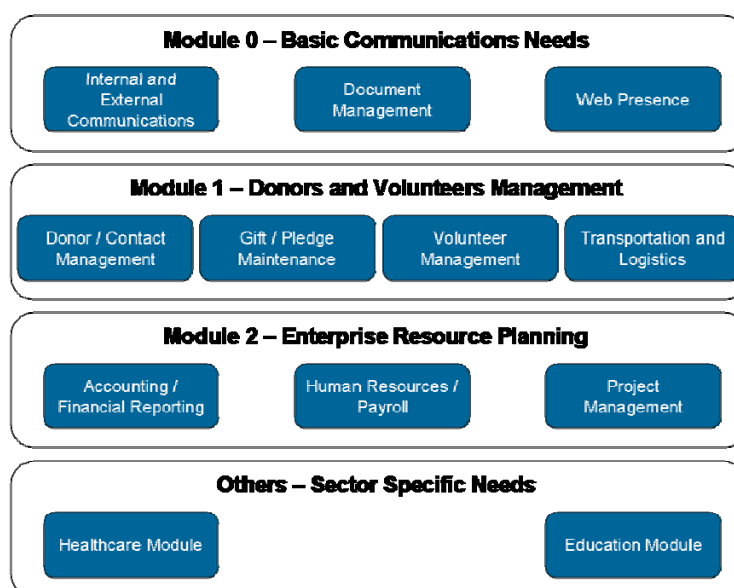


Figure 4. - IT Needs Clustered into SaaS Modules

### Module 0 – Basic Communications Needs

One category of needs of nonprofit organisations is common to all organisations, commercial or non-commercial. These involve the general management of basic communications.

#### *Internal and External Communications*

E-mail is the most basic need for any NPO. The SaaS model for e-mail solutions would include the following features:

- E-mail service
- Backup
- Redundancy and recovery
- Security, spam and virus filtering
- Reporting
- Version upgrade

In addition, the SaaS model also provides level 2 and 3 helpdesk duties.

#### *Document Management*

A simple document management system would involve the following requirements:

- Document sharing
- Security
- Access
- Version control

A document management system is a central repository with controlled access. SaaS applications such as Google Apps now offer such document management service.

#### *Web Presence*

Web presence is an important tool for NPOs. Their needs are as follows:

- Web design
- Hosting
- Update
- Maintenance

These services can be provided through SaaS with no need for purchasing and downloading of software, or coding. HotDoodle for example provides such Web services on a SaaS basis.

#### Module 1 – Donors and Volunteers Management

Due to the nature of its operations, there is a category of IT needs especially created to manage donor data and stakeholder relationships, collect and maintain gifts and pledges, and manage volunteers and logistics for projects and events.

#### *Donor / Contact Management*

Due to the non-commercial nature of its business, operations are dependent on donations and pledges from institutions and individuals.

It is therefore necessary to maintain a database of up-to-date data of all current and potential donors, and have the ability to communicate with members of the database on a personal basis on a large-scale through features such as mail merge. The absence of a good Donor / Contact Management system will inhibit the organisation's ability to maintain an ongoing relationship with this stakeholder group.

The key information of donor management are:

- Demographic data
- Prospect tracking
- Donor segmentation

This is a CRM system for donor management. SaaS solutions such as DonorPerfect offer solutions customised to NPO needs.

#### *Gift / Pledge Maintenance*

In addition to a simple financial accounting and reporting system, nonprofit organisations need a fully functional system to collect and manage gifts and pledges received from donors, allocate funds for various initiatives, generate receipts, and connect to its accounting system. In some cases, a good gift / pledge maintenance system could play the role of a financial accounting system as well.

Convio, with its Common Ground solution, offers Gift and Pledge Management solutions through SaaS.

### *Volunteer Management*

A special scenario of nonprofit organisations is the presence of a large number of volunteer workers, a large percentage of which work part-time. Assignment of duties and scheduling of work for volunteers can be a complex process, especially in larger organisations. At the same time it is important to keep an accurate record of number of hours worked, both for remuneration and reporting purposes. A volunteer management system is therefore a mandatory requirement for those organisations largely composed of volunteer staff.

The key features for Volunteer Management are:

- Contact information management
- Skills and competencies tracking
- Availability management
- Schedules maintenance
- Time reporting

### *Transportation and Logistics*

Another common feature of nonprofit organisations is the organisation of large-scale projects often for relief work in remote organisations, or large-scale events involving a large number of stakeholders, with complex transportation & logistics needs. Thus, a transportation & logistics module to work in close conjunction with the project management and volunteer management systems is important to ensure smooth running of events and projects.

## Module 2 – Enterprise Resource Planning

### *Accounting / Financial Reporting and Asset Management*

As the size and complexity of the nonprofit sector increases, the need for better management of accounts and assets is imperative. This is both to facilitate the management of each organisation as well as having the ability to report and provide consolidated information to regulatory authorities such as the Commissioner of Charities especially after the introduction of new regulations.

The key features are:

- Financials and accounting
- Order fulfilment
- Purchasing
- Inventory
- Billing

Software such as Netsuite offer SaaS solutions for Accounting, Financial Reporting and Asset Management.

### *Human Resources / Payroll*

NPOs need to manage employee data and payroll. The functions involved would include:

- Entry and update of employee data
- Ability to create employee profile reports,
- Management of salary information
- Maintenance of disbursement of remuneration.

## *Project Management*

Work in nonprofit organisations largely occurs in the form of time-based projects which involve a large number of resources, personnel and non-personnel. Projects would also entail a large number of activities leading up to an event in addition to the event itself. A robust project management solution would therefore be necessary to handle large scale projects efficiently and on-schedule.

## Others - Sector Specific Needs

As described in section 1 the NPO landscape is extremely diverse. There are IT needs of organisations within specific sectors which would not be applicable for organisations in other sectors. However, these functions are critical to the sector in which these organisations operate. Examples of such functionality would be patient case management and medical information management in the healthcare sector and management system for parents /schools in the education sector.

### *Healthcare*

Providing medical support to the needy and aged is an important activity of the nonprofit sector. The processes involved in the healthcare sector are significantly different and in addition to the systems described in this section earlier, additional systems would be extremely useful for efficient functioning.

#### Medical Information

Considering that nonprofit medical help is often afforded through the setup of clinics which are at times separated by a significant span of time, keeping medical history for repeat patients is critical. Further, availability of medical information of patients will give the organisation the ability to predict patterns of common ailments and therefore forecast requirements of medicines and other treatment. With the widespread usage of mobile computers and the ready availability of the internet, past medical history would be made available to doctors during the clinics which will significantly improve the quality of medical help provided.

#### Caregiver Information

Medical assistance in nonprofit organisations is often provided by doctors on a part-time basis, and thus a database of volunteer doctors and their availability is key to scheduling clinics at times when caregivers are available.

#### Care Plan Management and Case Management

Working in conjunction with the medical information database, the care plan management & case management modules will be able to assist caregivers in managing long-term treatment of patients and also provide this information to the patients in the form of printed prescriptions and instructions.

### *Education*

#### Parent / School Management

Nonprofit organisations are also widely involved in the provision of education especially at pre-primary and primary levels. Although the functionality of management of class schedules, student rosters and teachers is similar to those of other scheduling tasks they come with their own uniqueness which may be able to justify the requirement of a specialized system.

Categorisation of the IT needs of the various organisations leads us to the development of potential IT models which can be used to satisfy these needs.

## *Analysis of the IT Enablement of the Commercial Sector*

In order to better understand the use of SaaS, we have analysed the various initiatives underway to enable IT in the commercial sector, in particular for SME. In Singapore, there are about 150,000 SME, of which 98% have less than 99 employees. Since 2006, the total spent by small and medium enterprises (SME or companies with up to 999 employees) on hosted applications and SaaS has been constantly increasing at a 30% YoY growth rate<sup>10</sup>.

### Case for SaaS in the Commercial Sector

Based on our analysis, we can summarise the challenges of SME in serving their IT needs as:

- Rising costs
- Insufficient funds

#### *Rising costs*

Firstly, we observe a trend in the commercial sector for organisations to move their IT spending from CAPEX to OPEX. Currently, we estimate the IT spending to represent up to 25% of CAPEX for SME, with 20-23% of SME IT budgets being for software, security, storage and networking.<sup>11</sup> This represent a hefty amount, in particular, in the current economic downturn and SME are struggling to find the necessary funding to cover these rising costs.

#### *Insufficient funds*

Similarly to the Nonprofit sector, SME usually lack the funding to hire IT resources to support their needs and to undertake critical IT missions such as:

- Data security
- Downtime management
- Costs / Benefits analysis
- Data ownership
- Data migration

Hence, SME are looking at new IT enablement models offering on-demand and pay-per-use services, such as SaaS.

### SaaS Model in the Commercial Sector

SaaS offers a cost-effective, high-value option for SME, as a paid or leased service, in particular in the following sectors:

- Wholesale and Retail
- Professional Services
- Healthcare
- Financial Services

To enable IT in the commercial sector, the Infocomm Development Authority of Singapore (IDA) has launched the Grid Market Hub initiative, a “marketplace for sharing, buying and selling

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<sup>10</sup> AMI Partners study, 2008

<sup>11</sup> “Why SaaS makes sense now?”, Raju Chellam, AMI Partners, Business Times, 2008

infocomm resources such as software, computing and storage.<sup>12</sup> The model will be available in 2013 and will offer to the commercial sector on-demand and pay-per-use services.

From a pricing perspective, the model is intended to provide Singapore's commercial sector with low cost services with more than 80 SaaS providers leveraging the national grid to offer productivity and desktop publishing tools on-demand.

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<sup>12</sup> "Creating a Grid Market Hub", iDA website, 2008