e-Commerce Opportunities;
Economic Development, Fiscal and Financial Aspects

Any mainstream process within government has the potential of becoming a driving force, an engine for governmental & socioeconomic competitiveness and opportunities. In Puerto Rico, the mainstream process has been the Budget[1].

Technology is fundamental today for conducting any mainstream process reengineering. In addition, wise incorporation of technology into a process may profoundly influence the organizational culture within government and the country. Let's share an e-commerce process reengineering about paper consumption and it's by products and broad competitiveness consequences.

In fiscal year 2000, the Office of Management and Budget (OMB) of the Government of Puerto Rico (GPR) consumed 1/4 fourth (exactly 25%) of the quantity of paper consumed five years before in its fiscal year 1995. There was no trick or magic, nor this is an exception. The fact is that paper consumption dropped consistently every one of the past five fiscal years (to 82% in 1996, then to 58% in 1997, to 52% in fiscal 1998, to 31% in fiscal 1999, and to 25% in the year 2000) as a consequence of a change in policy.

When OMB decided to reengineer its budget process and adopted the policy to make the vigorous paper consumption organization *paperless*[2], nobody thought that a more profound change in governmental organizational culture and habits might be attained. The key issue was how to improve the budget formulation process to improve delivery and provide services (budget documents, etc.) to a wider and more diverse clientele and decrease paper consumption. Thereto, paper consumption became a clue, the measure for the more sophisticated information technology or electronic process.

Originally OMB thought that it had to eliminate the hard-copy print shop and set forth the policy of primarily delivering electronically, using the Internet and print hard copies by exception or on demand. But still in December 1999, OMB had the same quantity of personal printers than four years before. Some reports and drafts were being printed on paper for internal use. This was incongruent with the goal of becoming a paperless entity. A lesson learned was that it had to micro manage to some extent tasks, such as paper purchases and ensuring the estimates were generally reasonable. Initially OMB did not enforce too much control, just required justification and made comparisons. However, in fiscal 2000, OMB intended to reach the paperless goal (1/4 of 1995 level). For that reason, on October 1999, OMB started eliminating all printers and using screen as the "place" to "print" reports for review. Accordingly, people were trained on application development and some internal paper based processes were converted to electronic in November 1999. But in December 1999, a warning sign showed: a significant quantity paper purchase was submitted for approval. The order was being justified to stock for meeting ordinary

demand. Potential users were required to submit and justify individual requests. As a consequence, the original 400 reams order shrink to several orders representing 180 reams, or 45%. Yes, some may say that the process cost increase geometrically, and they may be right just to argue the approach on this exception, but on the long run people realized that we can still save some trees and limit paper consumption to real justifiable needs.

Let's imagine for an instance how the traditional budget formulation process behaved for several years before. Some 135 agencies submitting three copies of their annual budget request in volumes or binders of and average of 80 pages. One agency represented 240 pages, 100 agencies represented 24,000 pages; the 135 entities submitted an estimate of 10,000 pages in original. OMB also made some copies of selected sections of those 10,000 pages, and each agency made and discussed several drafts before the request were formally submitted to OMB. Just imagine a "Search" for any word or phrase or number. That is why the traditional way of making the GPR budget in 1992 was a cumbersome process. That is why Puerto Rico was less competitive than today. Over ten thousand pages containing thousands of programs and activities to be analyzed. Financial information presented in several formats, in terminology incomprehensible to most citizens, yet essential to be taken care properly, for it will result in a next year budget to service citizens.

Another most held secret of the then traditional budget process was its accounting once appropriated. In 1993, the very peculiar approach observed in documenting and executing the then traditional paper based budget process was mostly in this way:

1. An agency would typewrite or prepare in a personal computer the budget request; if the agency used a personal computer, they would most likely use a word processor and spreadsheet; several different vendor applications and the electronic format, which were not uniform or common to all.

2. The agency would then print into paper the budget request, and submit it by special messenger service to OMB.

3. OMB would review the request, make the decisions and reenter most of the request data (quantities, amounts and text narratives) into electronic documents (word processor and spreadsheets); OMB also used several different vendor applications and the electronic formats that were not uniform or common to all employees within OMB.

4. OMB would then file rudimentary word processor documents in a floppy disk and transferred to its "Publications Section"; Publications opened the files and by simple Cut & Paste inserted the information in Page Maker; formatted and proofread, printed 'originals' were provided for photocopying (in 1993; to a commercial print shop in 1992).

5. Once printed, Budget Document (about 250 copies) was distributed to legislators, each state government entity, and to about 20 college libraries.

6. After June, when the budget had been appropriated, OMB would prepare a listing of legislated changes as to amounts only, and forward it to previous recipients; however, narratives were not regularly updated.

7. Normally between mid to late July, each agency would allocate each line item in the Budget Resolution, according the official account code number; and, then the figures were typed (no personal computers were used, since Treasury Department 'Executive Budget' forms had to those printed by the General Services Administration).

8. Typed Executive Budget forms (approximately two pages per program, for about 1,200 programs say 2,400 pages, containing an average of 100 accounts or lines 240,000 entries) were hand delivered to OMB for review and approval.

9. Once approved OMB, data entry section recorded the amounts electronically in Treasury's CIFAS accounting system, something normally completed by mid September.

10. Two and a half month after the beginning of the fiscal year, after conversion from paper to electronic and to paper several times, the current year budget was ready for expending in the maximum-capped accounts. The GPR had conducted limited operations for almost ¼th of its fiscal year without duly operating financial controls; basically ordinary payroll was the disbursements authorized.

The reengineering of the budget process was applied to the "back office" process itself and to the final product. Thereto a "back office" electronic budget application was developed in 1995 to electronically create the next year budget request, the macro reports for the Budget Document, and electronic amounts appropriated. The accounting of the Executive Budget, which once took months and some 240,000 entries to record, twice (by agency and by OMB), now requires only changing any amount appropriated for an amount different from the one recommended, if any. These changes are done in a few hours after the final Budget Resolution is released, and the accounting is done electronically in minutes, by use of the government wide-area telecommunications network, **PR StarNet**. The most dramatic year the Governor signed the Budget Resolution on June 30, 11:30 A.M., and its accounting were completed before 4:00 P.M., that same day, just in time for commencement of operations of the new fiscal year the next day.

As to the end product, on February 1996 the GPR did its 1st public try. The Governor presented a CD-ROM containing the Proposed Budget for Fiscal Year 1996-97 to the Legislative Assembly at his Budget Message. It was a Multimedia type presentation, developed by use of third-party help. It was an innovation, a 1st!

It was nice for a show, but too slow for serious regular access. However, it was the first visible change to technology in fundamental governmental public documents. The pace for the future was set forth; it was a milestone, the point of no return. Feedback from the general public, potential vendors, and opinion makers made OMB realized it had become the leading technology agency in the GPR. OMB won public recognition and support; and proved progress and had achievements not imagined in 1992.

One principle learned from the reengineering effort is that you should achieve and maintain the highest standards of your industry to be competitive. Although OMB manufacture budgets, it actually makes **the peoples' plan for their future**. You cannot deal with the future of a country making plans based on the convenience of a sector or political party you have to service all. Also,

plans have to be current and flexible. That is why OMB decided to look for objective criteria and evaluation.

Training, the often forgotten main component of a process reengineering, became the most significant resource of the mission. To enhance users budgeting knowledge and skills many approaches and topics were shared. One important --criteria-- document used in the aforementioned budget process reengineering was Governmental Accounting Standards Board (GASB)'s Concept Statement No. 2, *Service Efforts & Accomplishments*. In 1995, GASB authorized a translation to Spanish and printing 5,000 copies for training. It resulted in over 18,000 education hours to program directors and associates in fiscal year 1995-96 alone. Other specialty training instituted since 1995 includes:

• *Audit Symposium*, with attendance of over 400 operations and internal auditors annually (four symposiums were held);

• *Information Technology Summits*, with an annual attendance of 400 program managers, technicians and middle management (seven summits were held); and,

• *CRIE: Congress for Reengineering, Innovation & Evolution* (four), attended by over 4,400 front-liners since the summer of 1997(four sessions were held).

Lack of adequate staff in 1995, made OMB develop and intensify technology training efforts. For instance, in June 1994 OMB had no information technology certified employees. In October 2000, OMB had 10% of Puerto Rico's Microsoft Certified Professionals (17 out of 172). The budget network development consequence has allowed the GPR to acquire equal or better conditioned technical skills than private businesses.

The political opposition, as well as the press started to become suspicious about the project. Although such suspiciousness was expectable in a highly political environment and as a consequence that people judge others from their belief and what would be their behavior, it was necessary to inject credibility to the process and its results. To provide credibility and make it a new paradigm, the Budget Document was subjected to a third party nonpolitical review. Credibility of the process (budget formulation) and the final product (the Budget Document) was achieved by use an annual independent audit by a respectable CPA firm and participating in non-governmental awards program to review and grade the Budget Document content.

GFOA (Government Finance Officers Association of the US and Canada, an over 12,000 member's organization) has an award program to grade Budget Documents. The GFOA's Distinguished Budget Presentation Award Program is the only international awards program in government budgeting. It was established to encourage exemplary budgeting practices and to provide recognition for proficient or outstanding Budget Documents based on four established criteria. Budgets are rated on how good it is as a *policy document*, as a *financial plan*, as *operations guide* and as a *communication device*. The Distinguish Budget Presentation Award is the highest form of recognition in governmental budgeting and its attainment represents a significant accomplishment for the government. It is a very positive factor in the national debt issuance's credit review process (according to interview by Government Finance Review, in June

1996). The GPR Budget Document (in Spanish) competing with other jurisdictions of the United States and Canada has received five annual awards since 1996.

Public access to the Budget Process, the Document and data is essential to control the growth of total spending. Increase in accountability for government performance and awareness of government achievements, informative updates to our citizens and attaining greater credibility and trust in the Government enhances competitiveness. The Puerto Rico budget engine has made program managers act more "entrepreneurial" by shifting the focus of the budget process from inputs and line items, to customers, outputs and outcomes.

Are those the right decisions? Is the resulting budget from the new process gauged to service better, more effective the country? How should the next year budget be approached based on the current one? In the traditional paper based process used until 1994, the time to compile the budget was so long, that the budget decisions were made as early as one year before it would become effective. So any feedback would ordinarily have taken more than one year to react and take affirmative or proactive action.

The new electronic budget process provides the versatility to make any change, even many and significant ones, up to three weeks before its issuance date. For fiscal year 2000-2001 proposed budget, changes were made up to Monday, February 7, and the Budget Document was independently audited and went public on the Internet, Wednesday, February 23.

Technology has played an important role in accelerating the budget process allowing the Governor an early submission of the Budget to the Legislative Assembly. This was not always that way. Prior to 1993, a traditional process resulted in late submissions of the Budget as late as April or May, leaving very little time for public discussion before the end of the fiscal year in June 30.

Macro outcomes, such as versatility, and activities and program outcomes, were what the 1994 reengineering of the budget process was basically heading forth. Thereafter, feedback or customer satisfaction has been criteria to keep track of good service that will eventually become an outcome.

The process initiated in 1995 has had many byproducts. Not only the budget process is now totally electronic, and the network has evolved as the multi-service network of the GPR. For example, another fundamental sector of Puerto Rico's economic process is tourism. The government budget network is now the superhighway by which Tourism is making e-business.

Permitting electronic access to the public on the Internet encourages others to do alike or better. A 1994 budget network dream that has grown up and enhanced into the government metro (144 headquarters) network, and is evolving into an Island wide multi-service telecommunications network in all localities (3,000+ locations) by the end of 2001. By the end of the year 2000, the shy budget process network started in 1995 provided voice, data, and image electronic transfers within Puerto Rico for approximately 80% all government service offices.

The Government of Puerto Rico is developing its budget network dream of 1994 into an advanced multi service telecommunications network designed to provide Quality of Service, efficiency for the benefit of its people. This Network, **PR StarNet**, has being developed under very clear and fundamental values that includes providing fast and secure access to services, move information instead of people, technology sensitive to the environment and natural resources, reduce government operational costs and increase productivity and competition.

Organizations behave like one-year old kids: they move (as a body) in the same direction and following head moves. In 1993, when Governor Rosselló took charge of the Island, there was no technology policy or strategy to support public access to information. In 1995, Governor Rosselló established the Governor's Information Technology Committee (GITC) to steer direction to our technological efforts and establish a strategy that will promote the fast integration of Puerto Rico as a leader in applied and innovative technology.

The GITC not only adopted technology policies but also established 20 Guidelines to help all agencies stay within the adopted policies and to share government technology standards with constituents. About 1,700 of the 3,000+ points-of-contact sites being installed are for the Education Department. Students are about 80% of the expected 1/2 million average weekly users by the end of the year 2001.

PR StarNet provides an enhanced scenario of competitiveness. Today 131 government agencies are connected through www.prstr.net (recently renamed and moved to the domain www.gobierno.pr), 107 rely on interagency electronic mail and there are over 50 public web sites that can be accessed through this address. In June 1996 and June 1999, the amount of technology projects started reached 75 and 168, respectively. In this way, we see how the Internet and telecommunications systems are eliminating the barriers between government branches and between governments.

Information technology is one of the cornerstones to make Puerto Rico more competitive. One primary engine these past six years has been the budget itself. The country's budget makes this happen inasmuch as it constitutes is *a policy document*, it is *a financial plan*, also *operations guide*, and it is used as *a communication device* within an *information technology environment*.

Public and open access are essential to control the growth of total spending, decentralize control to program managers, and increase accountability for government performance. Also, it makes program managers act more "entrepreneurial" by shifting the focus of the budget process from inputs and line items, to customers and results. To open Budget access, adopt an enhanced definition of the phrase "access to government". This issue goes beyond any 'freedom for information act' that, in some countries, provides citizens the right to request information kept by government.

When a government directs its efforts to improve it's Internet gateway it allows access to the various services offered by the government, as well as those established cybernetic sites within the country. In this way the *one stop all services concept* may be achieved.

Digital government will have a greater impact than tax reduction. The digital revolution for example, electronic tax payments, permit filings, job applications, benefit eligibility will change the way in which the Government of Puerto Rico offers services to citizens as well as be positioned globally in the field of telecommunications and technology. This will implicate some of the challenges that the Government of Puerto Rico and private business are working on for example: electronic taxes, privacy and charges per transaction, bandwidth for the transmission of services, security, among others.

Now, Owners, the People, need results. A Results-Driven Budget questions the outcome. Envisioning the result helps developing alternative options and deciding on the most effective, not necessary the most expensive. Radically rethinking and redesigning processes saves millions of dollars and increases productivity. Between the years 1993 and 1996, the GPR saved over $600 millions from reengineering initiatives and related efficiency and effectiveness measures.

Making the budget public on CD-ROM and the Internet, as well as other government documents shown on the www.prstar.net portal, leads to demonstrate openness in management; to submit actions and results for public scrutiny both locally and internationally, provide an awareness of Puerto Rico globally; as well as position government as leader in the forefront on the use of information technology

The nature and extent of the information shared has much to do with competitiveness. The GPR budget document on the Internet shares --in plain language-- four (4) years of trend data, Spanish/English, over 30 summary charts, based on GASB's Concept Statement No. 2 (SEA), with performance indicators at activity level for most activities of most of the programs. Full disclosure of audited financial statements, both the consolidated figures, as well as individual component units, entities' enacting laws, all OMB and IT regulations, an in-depth review of the economy, IT status and plan, and so forth. Such comprehensive budget document is a dream for students, academics or investors making a research. Also, it accounts down to the thousand dollars for any detail you may like to see. This openness, quantity and quality of information become competitive knowledge shared free, 61,300 hours every year, globally via the Internet.

Another achievement of the Budget reengineering process was head count control. For the past two decades (1970 - 1990) the GPR increased continuously both in head count and share of total employment. In 1993, OMB publicized its goal to decrease both ratios. With help from the media the issue of control in government employees came to public scrutiny.

Making it a public issue was essential, since OMB had to overcome the paradigm that a new administration should hire all those who help in the electoral campaign. Previously the politically sensitive corporate culture of the government was not only filling-in some 4,500 top management or public policy designated positions, but also creating regular positions and hiring some other 20,000 helpers of the winning political party. Some 100 agency heads, whose Governor appointment is subject to Senate confirmation, were personally under seize by about 50 legislators (out of 76) representing geographic districts and 54 mayors (out of 78 municipalities) affiliated to the majority political party.

Invariably agency heads would say or infer that they would hire if OMB authorized either the position or appropriating the funds, or both. The public discussion helped not only to stop growth, but also to reduce shares. As a result of popularizing this fundamental item of the budget, while total PR employment increased from 978 thousand in 1992, to one million and 172 thousand in 2000, a 17.4 %, GPR's decreased 6.5 %, and its share decreased from 23.7% in 1992, to 18.5% in 2000; and the Executive Branch share decreased from 21.9% in 1992 to 16.7% in 2000.

The reengineered budget process has made possible a productivity increase of over 60% in eight years. Today the GPR delivers *additional new services*, and have *enhanced others*. On the other hand, the Government relies on fewer personnel, better trained, skilled, remunerated and productive, since there are much more and better things being done that have been done before, but with less people.

An example of productivity increases is the Tax Reforms. The 1994 and 1999 Tax Reform and Rates Reductions account adjustments decreasing General Fund revenues in excess of $1,000 million annually.

The Puerto Rico the electronic budget process initiative has resulted in profound changes and made trends change for the better, increasing what has to, and decreasing what has to.

In summary, any mainstream process within government has the potential of becoming a driving force, the engine for governmental & socioeconomic competitiveness and opportunities. If your government is serious about it and seriously intends to accomplish a quantum leap on economic development, they should try out e-commerce in any (financial) mainstream process to succeed.

Thanks,

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[1][] Refers to the budget development or compilation process, and to the official Budget Document that contains the explanations and justifications for the Executive request for appropriations by the Legislative Assembly or parliament.

[2][] Paperless is an absolute term; many of us use the term as essentially meaning "paper consumption conscious"; paper savings results may range widely depending the actual overuse and miss use of paper within the organization, as well as other factors.