

**Comentarii cu privire la propunerea Depozitarului Central de achizitie a unei noi platforme tehnologice si asupra procesului de selectie al furnizorului pe baza ofertelor prezentate la Adunarea Generala a Actionarilor Depozitarului Central (DC) din luna aprilie 2014**

*Nu am identificat in prezentarea planului de afaceri si a proiectului de achizitionare a unei noi platforme tehnologice nici o analiza economica care sa prezinte:*

situatia multi-anuala a veniturilor si cheltuielilor ca urmare a implementarii planului de afaceri propus, situatia comparativa multi-anuala a veniturilor si cheltuielilor generate de catre platformele individuale propuse, inclusiv pentru cea existenta, calculul randamentului investitiei sau alti indicatori de profitabilitate.

*Nu exista o analiza a impactului economic al implementarii unei noi platforme tehnologice asupra participantilor la piata de capital, analiza care sa prevada impactul asupra investitiilor necesare, veniturilor si costurilor acestora.*

*Mai mult decat atat, nu am identificat raspunsuri la unele intrebari, cum sunt cele de mai jos , astfel incat sa putem considera aceste propuneri ca o baza solida pentru aprobarea deciziei de investitie:*

- Care sunt motivele economice concrete care ar justifica inlocuirea softului actual cu o noua platforma tehnologica?
- Care sunt avantajele competitive concrete ale acestei investitii si care sunt efectele acestor avantaje asupra rezultatelor financiare ale DC: venituri, cheltuieli si profit net?
- Va genera aceasta investitie venituri suplimentare sau va determina o reducere a cheltuielilor, vor avea efecte care vor creste valoarea afacerii si o crestere a profitabilitatii afacerii ?
- Care va fi impactul asupra rezultatelor financiare ale DC al obiectivului acestuia de a deveni un lider regional?

**Comments with regard to the new technological CSD platform acquisition and the software provider selection process (DC GSM's agenda / April, 2014)**

*We did not identify into the presentation of the business plan & project for acquiring a new software the economic analyses as:*

multi-annual income statement of the business plan, comparative multi-annual income statement, with detailed multi-annual revenues forecasts, generated by each software in order to understand the overall net results of using each software (existing & new), Return on Investment calculations or other profitability ratio.

*There is no economic impact analysis of implementing a new software with focus on the investments, operational costs & revenues generated to the stakeholders of the capital market.*

*Moreover there are still no answers to questions, as the below ones, in order to consider the presented project charter and business plan as a reasonable foundation for a positive investment decision:*

- What are the concrete economic reasons that could justify the investment in a new software, by replacing the old one?
- What are the concrete economic competitive advantage of this investment and how are these economic advantages translated in financial figures as: revenues & profit for the shareholders of the CSD?
- What estimated increase in revenues will bring this investment, except the normal business increases, or what cost reductions will bring this investment that could add value to the business and increase the profitability of the company?
- What is the financial impact of making or not

- 
- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>- Care <u>este impactul financiar asupra DC</u> daca se face aceasta investitie astfel sau nu se face?</li> <li>- Care sunt <u>riscurile acestui proiect</u> de implementare a unui nou software si cum vor fi aceste riscuri gestionate?</li> <li>- Care va <u>fi impactul asupra politicii de preturi</u> a DC?</li> </ul> | <ul style="list-style-type: none"> <li>- <u>making this investment?</u></li> <li>- How is the <u>strategic objective</u> of CSD to become a leader in the region <u>to be quantified in financial figures?</u></li> <li>- What are the <u>risks of implementing</u> a new software and how will be this risks mitigated?</li> <li>- What will be <u>the impact on the pricing policy</u> applied by the CSD?</li> </ul> |
|---|---|

### **Procesul de selectie al furnizorului de software**

Fara a avea detalii de structura a costului, este vizibil ca DC nu a inclus in totalul a fiecarei solutii urmatoarele cheltuieli:

#### **Investitii**

- amortizarea investitiilor hardware (servere de proces si de date, arii de discuri/stocare pentru centru de date primar si de rezerva, precum si pentru sistemele de test)
- amortizarea investitiilor software (licente de baze de date, sisteme de operare licentiate de regula per processor)

#### **Cheltuieli de exploatare**

- maintenance anuala hardware (10%-15% din investitia initiala)
- maintenance anuala software sisteme de operare, baze de date, middleware (or annual subscription) – foarte scumpa in cazul Oracle
- rezerva anuala pentru adaptari/particularizari de soft (avem o lunga experienta cu EFA Software – fostul provider)
- echipamente de comunicatie cu platforma Europeana T2S; nu conteaza daca avem sau nu business cu T2S; in orice situatie costul (cel putin cel fix) trebuie platit

In plus, cel mai probabil, Depozitarul trebuie sa reinnoiasca echipamentele hardware la fiecare 5-7 ani (deci vor aparea investitii in anul 5/7), altfel intretinerea devine scumpa, sau echipamentele nu vor avea un service garantat de la furnizor.

### **Software provider selection process**

Even in absence of any details with regard to the cost structure of the offers received from the software vendors, it is clearly visible that the DC did not include in the total cost of each solution the following expenses:

#### **CapEx**

- hardware investment/depreciation (processing servers and data storage servers for primary and disaster-recovery locations, and also for testing platform)
- software investment/depreciation (for example the database and operating system licenses per each processor)

#### **OpEx**

- annual hardware maintenance (10%-15% of initial investment)
- software maintenance operating systems, databases, middleware (or annual subscription) - very expensive for databases - most probably they will use Oracle
- an annual reserve for software customization/adaptation (we have a long experience with EFA Software on this area)
- communication equipment and services with T2S; it doesn't matter the CSD whether they do business with T2S or not, they have to pay this fixed cost

Additionally, most probably they have to renew the hardware of the central system at each period of 5-7 years (need to add more CapEx starting with the 5th/7th year), otherwise the maintenance will become expensive, or the machines will run out of

Bazandu-ne pe experienta noastră în cadrul BVB, cheltuiala anuală pentru rularea platformei DC va fi mai mare cu cel puțin 150.000 Euro anual față de cele prezentate, și va fi diferită de la o soluție la alta.

De exemplu, pentru ofertele MIT (Millenium IT) și OMX, dacă luăm în considerare numai câteva elemente suplimentare, costurile absolute și relative se schimbă considerabil:

1. MIT necesită un sistem de baze de date scump (Oracle), în timp ce OMX lucrează cu un sistem "free" numit Postgres, deci OMX va fi mai ieftin decât MIT cu o sumă de aproape 250.000 Euro pe 5 ani
2. MIT are nevoie de un sistem hardware specific/dedicat cu investiții de sute de mii de euro, în timp ce OMX necesită numai un sistem de componente hardware mult mai ieftine, sub virtualizare, mult mai puțin costisitoare decât în cazul celui dintâi
3. ca o consecință, costul de întreținere pentru platforma de rulare a softului de bază este clar în favoarea lui OMX

Dacă ajustăm ofertele MIT/OMX cu cheltuielile enumerate mai sus pe o perioadă de 5 ani, cel mai probabil, diferențele dintre ele vor fi în jur de 10-15%, și nu ca în forma prezentată cand oferta OMX este perceputa ca fiind cu 70% mai scumpă decât cea de la MIT.

Alte observații cu implicații importante asupra costului total, neluate în calcul:

- în prezentare sunt menționate costuri aditionale ale proiectului, dar acestea nu sunt cuantificate sau estimate
- nu există detalii sau o structură a costului de implementare
- nu există menționate cifre, valori, lucru ușual pentru prezentarea unui proiect: nr. de ore estimate, dacă aceste costuri includ cheltuieli de acomodare și transport pentru echipele de lucru etc
- nu se menționează dacă cifrele sunt cu sau

the provider service

Based on our experience in BVB, the total annual expense for running the new DC platform have to be increased with at least 150.000 Euro/year in addition to the figures presented in the final comparative table and it will be dependent on chosen solution.

For instance, at the offers received from MIT and OMX, if we take into consideration only few supplemental cost elements, the absolute and relative costs of the offers will become considerable changed:

1. MIT requires an expensive database system (Oracle), while OMX requires a freeware system (Postgres), so OMX is cheaper than MIT with an amount of about 250.000 Euro / over 5 years
2. MIT requires a dedicated and specific hardware with an investment of hundreds thousand Euros, but OMX need only a set of "commodity" hardware under a virtualization system, less expensive than the first solution
3. the maintenance costs for both hardware and software are clearly in favour of OMX

If we adjust each offer MIT/OMX with the expenses enumerated above, most probably, the difference between OMX and MIT will be around 10-15%, not as in this moment when the OMX is perceived as 70% higher than the one from MIT.

Other observations with important implications on the total expenses per solution which are not taken into consideration:

- additional costs are mentioned in the presentation, but not quantified or estimated
- no details or breakdown of the implementation cost
- no details about the usual figures from a project management : no of hours estimated, if the cost/hour is including accommodation and travel costs for the implementation team
- no mention if the figures are with or without VAT (in fact, most probably, they are without it)

fara TVA (de fapt, cel mai probabil, sunt fara TVA – inca odata cheltuieli suplimentare importante)

- once again an important additional expense)

### Concluzie

*DC a utilizat pentru compararea ofertelor furnizorilor de solutii de platforma o metoda bazata pe costuri vizibile, explicite, metoda care nu este de natura sa determine costul real al companiei cu diferitele solutii prezentate.*

*Ca urmare, materialul pentru selectia providerului nu constituie o baza corecta nici pentru decizie, si nici macar pentru simpla comparatie intre solutii.*

### Conclusion

*The DC has used to select the best offer for their new platform, in terms of price, a method based on explicit/visible costs. This method is not a suitable one to determine the real cost of implementing and running the new platform.*

*As a consequence, the material received by BVB to select the software provider cannot be considered as a fundament neither for the decision, nor at least for the simple comparison between solutions.*

### Recomandare

Metoda corecta, profesionala pentru estimarea cheltuielilor cu platformele software este cea bazata pe “total cost of ownership”/TCO. TCO este de natura sa descopere toate costurile ce decurg din utilizarea infrastructurii IT, deoarece detinerea si operarea unui element de infrastructura IT aduce pe langa costul de achizitie, si costuri precum instalarea, punerea in productie, operarea, upgrade-ul, intretinerea platformei etc. Ca sa nu avem niciun dubiu in privinta costurilor absolute, dar si pentru comparatia corecta intre provideri, pentru fiecare an (incepand de acum si pe tot parcursul vietii economice a investitiei) este necesara o estimare a costurilor dupa o structura de forma:

### Recommendation

The correct method, the professional one, to estimate the total expenses with the new platform should be based on “the total cost of ownership” (TCO) principle .

Total Cost of Ownership is an analysis meant to uncover all the lifetime costs that follow from owning certain kinds of IT infrastructure elements, due the fact TCO brings purchase costs, acquisition cost, and also brings costs for installing, deploying, operating, upgrading, and maintaining the platform.

In order to eliminate all doubts with regards to the absolute costs, but also for a fair comparison between providers, they must provide us a cost structure based on the model below, for each year, starting from now and covering the economic life of the investment:

	Acquisition Costs	Operating Costs	Change Costs
Application Software	Obvious costs	Obvious costs	Hidden costs
Hardware	Obvious costs	Obvious costs	Hidden costs
Database Software	Hidden costs	Hidden costs	Hidden costs
NW & Comm Hardware	Hidden costs	Hidden costs	Hidden costs
Middleware Software	Hidden costs	Hidden costs	Hidden costs
Personnel Expenses	Hidden costs	Hidden costs	Hidden costs
Other Expenses	Hidden costs	Hidden costs	Hidden costs

**Nota:** Numai costurile totale vizibile pentru derularea proiectului pe o perioada de 5 ani, asa cum sunt ele prezentate in ofertele colectate de catre DC, pot ajunge la valoarea de 3.260.000 Euro

**Note:** Taking into consideration only the visible part of the project, over a period of 5 years, according to the offers collected by DC, could reach a value of 3.260.000 Euro