



Digital Transformation

12 Consortium-based Approaches to Software Procurement

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Distribution

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1. Introduction

Due to the size and resources of many community housing organisations (CHOs), the need for a consortium-based approach to procuring software in the sector has been raised on various occasions.

Indeed, this was raised by the NSW Federation of Housing Associations in the mid-1990s when the size of the community housing sector as a whole was much smaller at that time than it is today.

To date, (as far as it is known), whilst some have previously considered a collaborative approach, all CHOs operating in Australia have procured software products as individual organisations.

The purpose of this document is to assess the implications of a consortium-based approach to software procurement and implementation. This will assess:

1. Potential benefits
2. Factors to consider
3. Implementation approaches taking into account the variations in CHO processes and operations
4. Supplier feedback from those choosing to respond to a survey issued in October 2022.

NB: it is NOT the intention to make any comments or recommendations on the suitability of any supplier products.

2. Background

To date, all CHOs operating in Australia have procured software products as individual organisations. The closest that any form of consortium came into being was with a group of four NSW Tier 1 CHOs combining in 2013 to define and agree upon a common set of business requirements, with each organisation eventually procuring systems separately for a variety of reasons.

3. Potential Benefits

In principle, a consortium-based approach has a number of potential benefits (aside from the factors to consider which are set out below).

In theory, the potential benefits are as follows:

1. Economies of scale could potentially be achieved in terms of licensing / subscription, implementation and support costs.
2. The procurement process could be straight-forward **IF** all members agree on business requirements and have defined a common operating model.
3. CHOs would not be reinventing the wheel by going it alone, in theory saving time during the implementation (and therefore cost).
4. Members could benefit from ideas from other members to the consortium in formulating requirements and configuring the solution.
5. Information sharing and benchmarking across the consortium could potentially be achieved (subject to members' needs on data access and user security).

4. Factors to Consider

Common reasons why consortium-based approaches in the CHO sector have never managed to come to fruition so far are:

1. Suppliers have typically been unwilling to offer licensing packages due to:
 - a. Whether the software licensing and the project itself are financially viable from a commercial perspective.
 - b. Potential issues as to how support would be provided.
 - c. The costs of providing support.
 - d. The complexities of agreeing contracts; who the purchasing party will be; clauses relating termination, support and liability.
 - e. The logistics of implementing the software and configuring it to meet the needs of each party involved in the consortium.
 - f. Configuring user security functionality.
2. In general, all CHOs do the same things in terms of **how** services are delivered **BUT** all tend to deliver these business functions in different ways, such that business requirements will typically differ and agreeing a common set of requirements can therefore become challenging.
3. Prior to software-as-a-service (SaaS) products evolving, the technical issues of installing the software were prohibitive and could not justify the cost, with too much risk on the side of the supplier.
4. Based on the above, suppliers were unwilling (perhaps not unreasonably) to provide such a service (even if it was financially viable for them) unless all parties in the consortium have the same requirements.
5. System security functions need to be sufficiently comprehensive to ensure that a user for one organisation could only see the data for the organisation they are working for, in other words, systems need to provide role-based security at portfolio level.
6. With the evolution to SaaS licensing models and the evolution to cloud-based systems combined with the ever-increasing scope in the functionality provided in such systems (which includes established data security and access controls being included as standard), a consortium-based approach **could**, in theory, be technically possible, **if** suppliers wish to include it as part of their pricing and implementation models.

5. Supplier Approaches

Based on the above factors, and rather than making assumptions as to supplier intentions in a changing marketplace, in October 2022 a survey was issued to all of the main suppliers of housing management systems to the CHO sector as well as selected suppliers of asset management planning and maintenance management systems.

Responses were received from the following suppliers:

System Type	Supplier
Asset management planning	1. Brightly Software (formerly Assetic, now owned by Siemens) 2. SPM Assets
Tenancy, property & finance management	1. EMS 2. SDM Housing Software
Tenancy & property management	1. Civica 2. Geometry 3. MDB Consultants (Chintaro)

Suppliers were advised that:

1. The survey would be fully confidential.
2. Specific comments made in response to the survey would not be disclosed to CHIA members
3. No commercial information on pricing (licensing, support or implementation) was sought.
4. All comments would be collated and presented as general views from suppliers operating in the community housing sector

The results are as follows:

5.1 Future Workshop

All respondents expressed an interest in participating in a future CHIA workshop with members to discuss the practicalities on consortium-based approaches to software procurement and implementation.

5.2 Sales Policy

Suppliers were asked as to their sales policy in responding to consortium-based approaches and whether they would respond to or decline a future procurement opportunity from a consortium comprising more than one CHO.

Answers by system type were:

System type	Would respond	Assess opportunity first before deciding
Asset management planning	1	1
Tenancy & property management	2	1
Tenancy, property & finance management	1	1
Total	4	3

5.3 Previous Shared Service Experience

Suppliers were asked as to whether their company had previously implemented its product in a shared services environment either in Australia or overseas (i.e., where a number of customers have worked together to procure and implement the software as part of a consortium).

Answers by system type were as follows. Note one supplier stated it had not implemented its housing management system in a shared service environment but has considerable experience with other products used in different industries:

System Type	Yes	No	Other Products
Asset management planning	1	1	
Tenancy & property management	1	1	1
Tenancy, property & finance management		2	
Total	2	4	1

5.4 Ability to Deploy in Shared Service Environment

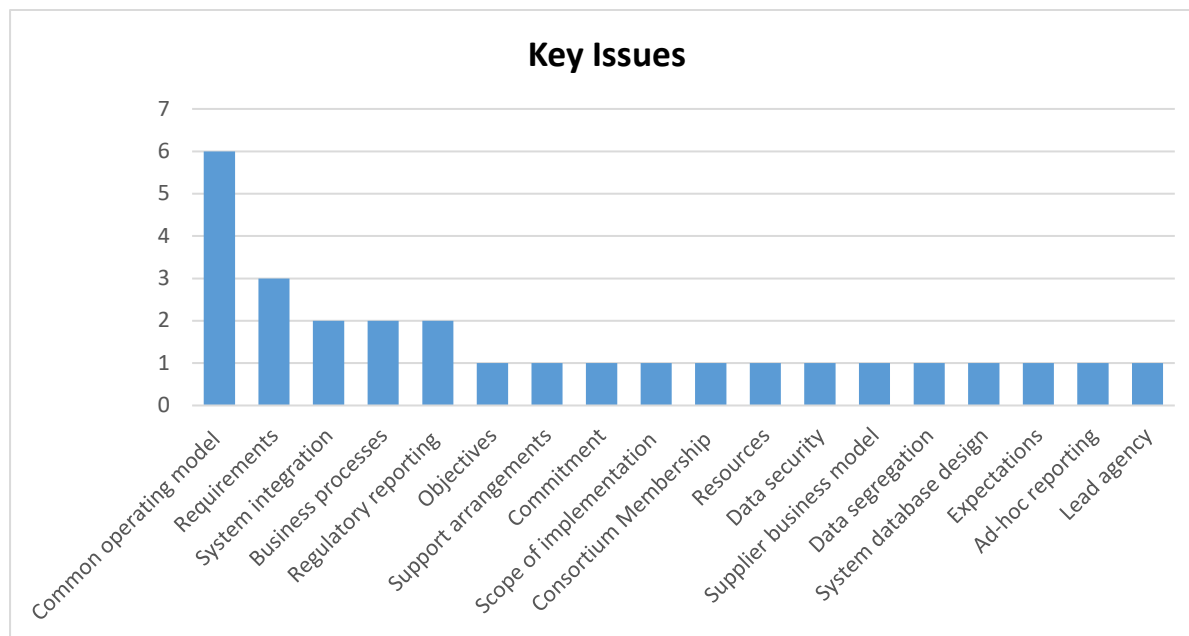
Suppliers were asked whether their systems *could* be implementing in a shared services environment from a technical / deployment perspective.

System Type	Yes	No
Asset management planning	2	
Tenancy & property management	3	
Tenancy, property & finance management	1	1
Total	6	1

5.5 Key Issues

Suppliers were asked to what are the key issues which CHOs need to fully consider in assessing whether to pursue a consortium-based approach.

These are broken down as follows:



These are broken down in more detail in the table below with comments grouped where appropriate, if the same issue was identified by more than one supplier:

Topic	Supporting Answer
1. Ad-hoc reporting	Common reporting requirements (although this can be done by each CHO)
2. Business processes	<p>a. Experience continues to show that each CHO has their own way of doing things. It would be a significant effort to align business processes and thinking between a number of CHOs – especially considering many are in competition through State transfer and funding programmes.</p> <p>b. Common set of business processes will be needed</p>
3. Commitment / cost sharing agreement	a. The level of commitment of each CHO to the procurement could be an issue in terms of how costs will be distributed.
4. Cost sharing / expectations	<p>a. Software terms will need to be agreed between the CHOs.</p> <p>b. Different CHOs have different levels of expectations and risk profiles</p>
5. Common operating model	<p>a. Common operating models will be needed for tenancy, maintenance, asset management etc, for all consortium members, including aligned business processes.</p> <p>b. Align common interests within the consortium group and organise training/development/enhancement requests etc.</p>

Topic	Supporting Answer
	<ul style="list-style-type: none"> c. To avoid some of these complications, consortium members would need to have similar business processes and be prepared to align system data structures e.g., finance chart of accounts and terminology, which may not be possible/practical. d. All need to use the same configuration, follow the same processes and the same data structures e. How would CHOs react to having a single environment for all members without access to each other's data after procurement/implementation? OR are they simply after separate software implementations for each CHO after consortium-based procurement occurs?
6. Consortium membership	Discussion and provision in the agreement would need to be made as to what happens if a member drops out, or a new member wishes to join.
7. Data security	<ul style="list-style-type: none"> a. Data security is likely to be a key issue, recognising that it's likely that a version of the European GDPR could be required across AU and NZ considering the recent examples of data breaches. b. Having one central schema / database across multiple CHOs will require a heightened level of data security including system features and data management processes.
8. Data segregation (system functionality / security)	Provision would need to be made as to how a consortium would expect a single software environment to handle segregation of their own local domains/groups/emails
9. Lead agency	Agreement will be needed on a single point of contact in the consortium (as the lead agency) with the supplier. Will members be prepared to nominate a lead agency to co-ordinate and respond to all questions?
10. Objectives	Objectives will need to be clear as what the consortium model is trying to achieve. Similar to the comments on the common operating model, the need to agree on common objectives could be a key issue.
11. Regulatory reporting	<ul style="list-style-type: none"> a. Common third party or Government compliance requirements b. Consortium members would need to in be in agreement regarding statutory reporting requirements.
12. Requirements	<ul style="list-style-type: none"> a. Reaching agreement on common requirements could be a significant challenge b. Understanding of consortium model requirements; lead agency, alignment of values and project purpose within the consortium group.

Topic	Supporting Answer
	<ul style="list-style-type: none"> c. Software terms need to be agreed between all the members to the consortium, especially if there are different requirements
13. Resources	<p>The consortium will need to assign resources to both the implementation project as well as future support. Issues could arise in whether CHOs can or will:</p> <ul style="list-style-type: none"> a. Commit resources b. Ensure resources will be available c. Agree on project implementation roles d. Agree on support co-ordination responsibilities after go-live
14. Scope of implementation	<ul style="list-style-type: none"> a. An agreed scope for the procurement with no customisation will be needed b. Another issue to consider is organisational specific branding.
15. Supplier business model	<ul style="list-style-type: none"> a. A consortium-based procurement needs to recognise the commercial business model of the supplier and where this could work for smaller CHOs. b. A clear and fair path of upgrade from shared to separated may be needed.
16. Support arrangements	<p>The consortium would need to remain in place after the purchasing/implement to advocate for the individual members with the software provider.</p> <p>(Refer above to lead agency and resource topics)</p>
17. System database design	<p>Trying to manage multiple CHO's from within the one software environment and database, with separation of CHO specific data and files provides many challenges and limitations that could require software enhancements or re-architecture of the software altogether.</p>
18. System integration	<p>Common system integrations e.g., finance, SMS, payments could potentially be an issue.</p> <p>Integrations to other CHO software applications can be challenging if the consortium has different Housing Management and Maintenance Management software.</p>

5.6 Viability of a Shared Approach

Suppliers were asked whether a consortium-based approach to procurement and software implementation was viable or realistic. If it is not viable or realistic, suppliers were asked to set out the reasons why.

Row Labels	Yes	Possibly	Probably Not	No
Asset management planning	1			1
Tenancy & property management	2	1		
Tenancy, property & finance management			1	1
Total	3	1	1	2

Where suppliers provided supporting details, these are shown in the table below:

System Type	Viability Answer	Factor	Supporting Details
Asset management planning	No	Legal Agreement	Nuances of legal agreement, otherwise separate legal agreements would be needed
Asset management planning	Yes	<ol style="list-style-type: none"> Suitability for smaller CHOs Implementation requirements 	<p>Certainly viable – and from this supplier’s perspective, more suitable for the smaller CHOs who can align their business processes more easily.</p> <p>Would certainly support a consortium approach from an asset and maintenance management software perspective, if it is for the smaller CHOs that would struggle to afford this type of software.</p> <p>Where procurement can be more easily established, configuration of different requirements between different CHOs across different States with their specific requirements, can be challenging.</p>
Tenancy & property management	Possibly	Common operating model	<p>It could be viable, if there was common operating models and business processes across all CHOs.</p> <p>If the consortium is large enough (say at least 5 CHOs), then there could be a large saving in ongoing support costs if support and maintenance was combined.</p>
Tenancy, property and	Probably Not	Distinct environments needed	Probably not viable as each CHO would require a totally independent and isolated instance.

System Type	Viability Answer	Factor	Supporting Details
finance management			The only services that can be shared are hosting and training, but this has never been achieved to date
Tenancy, property and finance management	No	<ol style="list-style-type: none"> 1. Implementation requirements 2. Data security challenges 3. Business processes 4. Lead agency 5. Decision making 6. Project management 7. Common operating model 	<p>May be unrealistic, depending on implementation requirements of the CHOs in the consortium.</p> <p>Based on past experiences, consortium-based procurement may be viable but implementation is not viable because of the technical and data security challenges noted above.</p> <p>Participating organisations will not have done enough preparatory work to agree on business processes, data structures and configuration requirements. This lack of agreement would blow out implementation costs and delay go live to point of abandonment of the project.</p> <p>Who will speak on behalf of the consortium when questions are raised by the supplier? Many of these questions will be of a technical nature and require knowledge of existing/proposed IT infrastructure.</p> <p>Who will be responsible to make decisions when any differences occur?</p> <p>Who will ensure all tasks are completed by consortium members to allow the project to progress on schedule?</p> <p>Who ensures implementation stages are signed off and allow the supplier to be paid when milestones are reached?</p> <p>Based on all this, smaller CHO's may be at a disadvantage being forced to operate under the business process and system configuration of a larger CHO that 'owns' the software/environment where the product is implemented</p>

5.7 Licensing Approaches

If suppliers had indicated that a shared service solution was viable, they were asked to provide general details on their approach to licensing, implementation and support. **NB:** suppliers were NOT asked to provide any commercial information.

To retain confidentiality, supplier names are not disclosed in the table below, nor is the system type indicated.

Note that some suppliers provided comments irrespective of whether they stated a consortium approach was viable or whether they would respond to such an approach.

Supplier	Answer	Supporting Details
Supplier 1	Not viable	<p>Separate subscription for each CHO, each with their own support contacts.</p> <p>The system would not be shared, each CHO would have access to their own database.</p>
Supplier 2	<p>Cost sharing</p> <p>Support arrangements</p>	<p>Volume discounts would be provided in terms of licensing, therefore smaller CHOs would benefit.</p> <p>Support costs would be negotiated with the consortium rather than end users</p>
Supplier 3	<p>Contract</p> <p>Implementation services</p> <p>Overall size of consortium</p>	<p>The consortium would have to identify and agree on the required functionality and outcomes sought, which would form the basis of the contract and statement of works.</p> <p>Specialist implementation and contract advice would be provided through this supplier's consortium experienced business unit.</p> <p>Licensing for consortium members would be based on the initial size of the member base.</p> <p>This would become the consortium floor, with new consortium members able to be added on a member-by-member basis, however any members which leave the consortium (thereby reducing the consortium below the original floor), would need to be covered by the remaining consortium members.</p>
Supplier 4	<p>Licensing of same solution</p> <p>Licence and support costs</p>	<p>Buyers would purchase all functionality required as a single purchase i.e., all consortium members would purchase the same functionality regardless of whether they use all or part of the functionality.</p> <p>Licence / support is covered under an annual subscription, based on total properties under management across the consortium.</p>

Supplier	Answer	Supporting Details
	Support overhead risk	<p>The biggest risk / concern for vendors will be the complexity of the IT environment(s) and potential ongoing support required across consortium members.</p> <p>From experience, smaller CHOs with little IT skills or resources can generate more support demand than a larger CHO with their own IT resources.</p> <p>Based on this, additional or 'on demand' support fees may need to be considered to manage multiple environments.</p>
Supplier 5	<p>Enhancement costs</p> <p>Hosting costs</p> <p>Licensing costs</p> <p>Support costs</p>	<p>Costs for ongoing software improvements could be spread across all members.</p> <p>Cloud hosting costs would likely be fixed depending on the size of the consortium, spread across all members.</p> <p>Licensing costs would probably be based on CHO size.</p> <p>Support costs could be consolidated if there was some consolidation on points of contact.</p>
Supplier 6	<p>Hosting</p> <p>Licensing</p>	<p>Consortium members can only realistically "share" hosting and training costs.</p> <p>Each would need to bear their own licencing and support.</p>
Supplier 7	Separate agreements	<p>Each CHO would need a separate agreement as support services would need to be provided separately.</p> <p>From experience it is better to have individual agreements rather than one central agreement. If a central agreement, this creates more administration for one of the CHOs or a separate organisation.</p>

5.8 Environment Setup

Suppliers were asked as to their approach to setting up environments to ensure:

- A common configuration
- A production environment which would relate to each member of the consortium

System Type	Topic	Supporting Answer
Asset management planning	Data migration	This supplier stated that individual data migrations would be needed, without providing any further comment.
	Individual production environments	Following on from the above, this supplier stated that each CHO would have its own production environment.

System Type	Topic	Supporting Answer
	One database / security controls access to data	One central database would be established with each CHO being allocated their own 'category' where their users would be given rights to only see and edit the data within that category of assets. This also allows a central approach for developing planned-projects at scale – for example, 3 CHOs could go to market for a bulk kitchen supply. For the common configuration, the upcoming AHI Guideline on Asset Management for CHO s is recommended.
Tenancy & property management	Common production environment	Approach will be to implement standard system configuration, reporting standards and training. Consortium members would share a common platform using the product's multi-company structure functionality, enabling a common configuration. Individual consortium members would be set up with organisation-specific branding for documentation, and access to organisation-specific reports, with confidentiality maintained between consortium-members.
	No issue	This supplier stated that neither (common or separate) would present any issues.
	Separate duplicated databases	<ul style="list-style-type: none"> a. Hold configuration data and CHO specific data in separate databases and allow individual configuration and changing of data values. b. The core software would be common though along with the business processes. c. By maintaining a common cloud hosting platform, databases and software allows for a high degree of care to be taken on the security of the data and system, based on the latest ACSC cyber security guidelines.
Tenancy, property & finance management	Consortium structure / common operating model	<ul style="list-style-type: none"> a. The consortium would need to be in place BEFORE procurement and implementation. b. CHOs would need to be of similar sizes, from similar sectors, have similar goals and management styles. c. If the above are in place, a common configuration AND a production environment for each member would be straightforward. d. If members all wanted hugely divergent configurations, then a consortium is not feasible.
	Separate duplicated databases	<ul style="list-style-type: none"> a. This is very difficult and depends on expectations of the consortium. b. The best solution would be that each organisation in the consortium would be provided with a duplicated

System Type	Topic	Supporting Answer
		<p>commonly configured database into which their current business data would be migrated.</p> <p>c. Separate file shares would be set up for each organisation.</p> <p>d. Security would be enabled to isolate one organisations data and files from another.</p>

5.9 Implementation Approach

Suppliers were asked to provide details as to their approach to the implementation to ensure that common requirements could be supported.

Comments by system type are provided below.

System Type	Supplier	Topic	Supporting Details
Asset management planning	Supplier 1	1. Common configuration	<p>a. Design a configuration to meet the needs of the group or groups of CHOs</p> <p>b. Implement the configuration – once the needs are known and the options are discussed and agreed, we would then implement within the AWS Sydney Data Centre</p> <p>c. Build the data models – from our asset management perspective, property and component level data is essential for good planning – rather than just provide the CHOs with the software, we would work with them to extract value from existing data</p>
		2. Implementation and support provided as a managed service	Aim would be for economies of scale for a common implementation to be identified and policed.
	Supplier 2	1. Standard implementation approach	An implementation for a consortium would be treated no differently than for all other customers procuring individually
		2. Support contracts separate	For support, there are a range of options. This is why this supplier recommends that each CHO is contracted individually so that they can tailor their own support needs. In reality, some CHOs will be proactive with good resources and others will not have the resourcing time to be

System Type	Supplier	Topic	Supporting Details
		3. Training	involved beyond just participating in the scheme. Education and train the selected people within each CHO – as part of a group or individually – depending on their needs
Tenancy & property management	Supplier 1	Consultancy approach	As part of the implementation, CHOs would be consulted on common and individual needs.
	Supplier 2	Common platform	<ul style="list-style-type: none"> a. Consortium members would share a common platform using the product’s unique multi-company structure, enabling a common configuration. b. Individual consortium members would be set up with organisation-specific branding for documentation, and access to organisation-specific reports, with confidentiality maintained between consortium-members.
		Implementation services	<ul style="list-style-type: none"> a. Implement standard system configuration, reporting standards and training.
	Supplier 3	Common platform	<ul style="list-style-type: none"> a. By maintaining a common cloud hosting platform, databases and software allows for a high degree of care to be taken on the security of the data and system, based on the latest ACSC cyber security guidelines. b. The system would deploy the same version to all members, thus ensuring consistency. c. Common issue management across all members would help with transparency and managing changes. d. Deployment to cloud systems is scripted so new releases would not require intervention by the CHOs.
		Requirements	<ul style="list-style-type: none"> a. The core software would be common though along with the business processes. b. All members would need to agree on the direction of any requirements

System Type	Supplier	Topic	Supporting Details
Tenancy, property & finance management	Supplier 1	Common platform	Since each organisation will have a duplicated commonly configured database as a starting point, they will all share functionality and business process while still seeing their own organisations business data and documents.
		Implementation challenges	Again, this approach still raises questions around access to the files / resources within a single hosted solution using the individual Windows / security / groups of each organisation
	Supplier 2	Agreeing requirements	Agreeing requirements and security configuration is crucial. As noted above, a consortium approach will not work unless there is common agreement.

5.10 Future Participation

All of the respondents stated they wished to be kept informed on CHOs who may be interested in pursuing consortium-based approaches to software procurement.

It should be noted that one supplier stressed it was not interested in individual CHOs approaching it to help them do the groundwork in establishing a consortium (in other words, CHOs must first establish and agree the operating terms of the consortium).

6. Conclusions

There are clearly a wide range of pre-requisites and risks for both CHOs and suppliers to consider in relation to consortium-based approaches.

1. Most of the suppliers identified the need for a common operating model as a key issue, with all CHOs needing to use the same configuration, have the same requirements, processes and the same data structures.
2. Clearly this will present an array of challenges for CHOs in:
 - a. Establishing the terms of the consortium.
 - b. Agreeing to common principles in relation to membership of the consortium.
 - c. Defining and agreeing business requirements.
 - i. As noted above, most CHOs do the same thing but many do this in different ways, therefore reaching agreement on business requirements could be taxing and challenging. Furthermore, the time involved in doing this could be somewhat protracted.
 - ii. Agreeing business requirements will also be dependent on the type of solution being sought. Suppliers operating in the CHO sector provide sophisticated,

flexible products that require focus in terms of how they are set up in relation to the business decisions that need to be made.

- iii. A key risk therefore is the extent of varying views or disagreements that may arise as to how a particular business function would be configured to satisfy the needs of all consortium members. It is distinctly possible that some members to the consortium may need to make compromises as to what is acceptable to them, which in turn, could lead to some of their specific operational needs not being set up in the manner they would prefer. This may also result in a change to their business processes across certain operational functions.
 - iv. The same configuration for use by all members will also be needed to ensure consistency in reporting.
- d. Documenting the requirements.
 - e. Agreeing resources to be provided by each consortium member for staff who would be involved in both the procurement process and then the implementation project.
 - f. Identifying a lead contact with whom the supplier can liaise with in terms of the procurement and then the implementation project.
 - i. Clearly this is likely to pose increased time demands on the CHO nominated as the lead agency / contact.
 - g. Managing internal relationships within the group.
 - h. Determining what happens if a member chooses to leave or wishes to join and then resolving any commercial issues that may arise
 - i. Agreeing the scope of data security and system access, particularly with a common configuration and shared access.
 - j. Agreeing the scope for systems integration
 - i. Some members may well have different integration needs than others, which in turn may require additional time by the supplier and hence cost, to establish the scope of integration.
 - ii. Would members be happy to share these costs or would they prefer the costs to be charged proportionately to the number of integration routines needed by each member?
 - iii. Following on from that, are suppliers even willing to consider proportionate charging?
 - k. Agreeing the terms for support and maintenance.
 - l. Agreeing contract terms, particularly if the supplier's approach is for only one contract to which all members are party to.
 - i. As indicated above, some suppliers are prepared to contract individually with each consortium member.
 - ii. The consortium would need to clarify the supplier's approach to contracting from the outset.
 - iii. As indicated above, provision needs to be made as to the implications if a member chooses to leave the consortium after go-live. If one contract is in

place, this would mean that the remaining members may well be required to pay more.

3. Based on the above, careful planning and preparation is needed by CHOs in establishing a consortium.
 - a. This is likely to incur significant time and effort.
 - b. Potentially cost savings could be achieved **IF** CHOs agree on how and where to share resources in:
 - i. Compiling requirements
 - ii. Agreeing common business processes
 - iii. Implementing the system based on the agreed common requirements and processes
 - iv. Possibly sharing responsibility in specific functional areas and thereby achieve cost savings, e.g., CHO x could focus on tenancy management and CHO y could focus on property / maintenance etc., assuming that common agreement has been reached.
4. In view of the varying responses from suppliers in relation to the viability of a consortium approach and the uncertainty as to the number of suppliers who would entertain such an approach, there is no guarantee that the consortium could select their system of choice.
5. The above therefore prompt the question whether a consortium approach is worth it.
 - a. **IF** CHO members can guarantee their individual commitment to such a project and agree common requirements and processes, and convey this to a supplier which is responsive to such an approach, then it certainly can be.
 - b. That is easier said than done of course. CHOs will need to be realistic on the potential challenges, obstacles, hurdles and roadblocks that they may face between themselves along the journey combined with the possible need to make uncomfortable compromises and understand the likely time and effort needed to arrive at a successful outcome.