

Core Principles

- Alternative approach to traditional methods.
- Encourages private investment in public infrastructure.
- Encourages a 'life-cycle- approach" to planning and budgeting.
- Partnerships are generally long term in nature (20-30 years).
- Increases industry collaboration.
- Potential for construction cost savings and faster implementation.
- Payments based upon contractor performance.
- Potential for preserved/improved levels of service.
- Drives innovation.
- Financial model is key.
- Owner needs to be clear up front with standards for building and life cycle post hand-over at end of term.

Considerations & Challenges

- Potential for disagreements between parties.
- Potential for confused lines of accountability.
- Potential for bias in the selection process.
- Private partner may be motivated to reduce costs at the expense of the service quality.
- Why P3? 1) Need (School, road, hospital, etc.), 2) Money (don't have enough up front), 3) Risk Transfer.
- In the public setting, the client receives back a maintained building.
- In the healthcare segment, often buildings are not built to last past the contract term.
- Client can be too far removed from the design team.
- From an owners perspective, there is incentive to deliver the best project possible.
- P3s drive innovation at hyper speed.
- Public owner may be able to borrow money cheaper.
- Facility could be re-purposed at end of term.
- If physical changes may be required during life of the agreement, need to ensure the contract terms allow. Particularly challenging when extensive technology will be involved.

When To Use

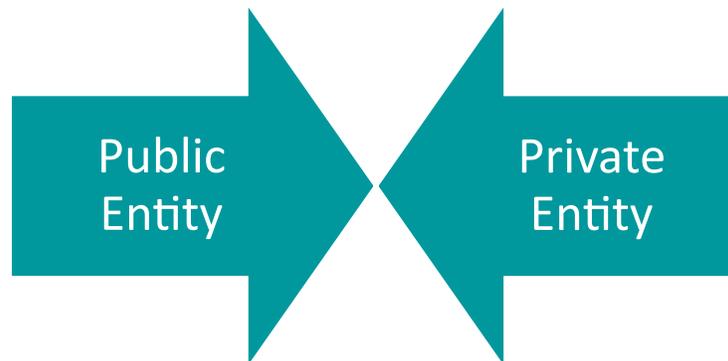
- GoC may use on projects over \$100M. City of Edmonton may use on projects over \$30M.
- Not the best model to use when the need exists for flexibility to cost effectively change/reconfigure the space/use within the building over time sheet.
- Better for fixed use facilities, not excellent for changing technology.
- Owners may want to move off capital balance

Benefits

- Life cycle costing considered.
- Building will be maintained for the life of the term as defined in the contract.

Prime Consultant's Perspective

- Usually led by a GC or the financier.
- Opportunity to drive innovation and efficiency if clear outcome and standards are articulated.



Architect's Perspective

- Architect has less control; does the risk out way the reward?
- Architects get stuck in the middle of delay claims.
- Contractor and/or Owner typically insist on the use of their own format of agreement with design teams on design build work rather than using the industry standard forms of agreement. These forms of agreement typically contain uninsurable clauses and are in contravention of the AAA's Practice Advisory. These terms assign liability to the design team for the project schedule and the difference between the bid price prepared on preliminary drawings without full compensation and the final construction cost.
- P3 work requires design teams to work for partial compensation to prepare partially complete preliminary drawings which are then used by the GC to submit a fixed construction cost. The risk created by pricing based on incomplete information is carried by the GC and the design team and is ultimately transferred to the P3 owner.
- Requires a significantly higher fee structure and longer schedule as multiple firms must be hired to take the design to bid cost certainty.
- All the issues with DB can be found within a P3.

Engineer's Perspective

- Due to the very formal relationships especially during the RFP phase, it is difficult to gauge what the end user really needs/wants.
- Engineers often work for the sub-contractors, and are further removed from the end users. Solutions are dictated by budget, not necessarily best practice.
- Life Cycle costing is a major consideration in the design and will benefit the owner.
- Life cycles costs are usually calculated as close as possible to the end of the contract. IE: for a 25 year project, a solution will be specified that lasts 26 years, while a 40 year solution would not cost much more.
- Unless a very tight outline specification is created, can lead to major disconnections between owner expectations and the final product as well as minimum code design.
- Too loose of an outline spec and the owner does not get even close to what they actually expected, even if the engineers advise against a contractor solution.
- Extremely fast paced, difficult to resource projects, especially in the RFP and early design stages.
- Outline specifications are often very prescriptive for the engineering world and do not encourage as much innovation as is sometimes thought. Often includes technical requirements more than performance requirements and functional requirements
- General, electrical and facility maintenance are all at the same table during the design process.
- No artificial separation between capital and maintenance budget. Much easier to use different technologies or installation practices that will reduce cost for the facility.
- In theory money is easier to allocate or flow between maintenance and capital cost budgets.
- Typically a more comprehensive review of the drawings by Facility Managers (FM).
- In a P3 with "open" statement of requirement or functional statements of need, innovation thinking and solutions are possible (see also cons for strict SOR).
- FM acts as a check or balance when compared to a pure design build.
- Cost of project split over 20 or thirty year concession.
- Architects and engineers work for the contractors. Best and brightest now focus efforts on meeting the statement of requirements in the most cost effective manner to maximize profit for their clients, (the client means the contractors and the concessionaire).
- Efforts are not focused on designing best buildings or best system. Arch and Eng spend effort to find holes and omissions in the documents and are basically trying to short the Owners.
- Statement of requirements are written years before construction. Does not allow for incorporation of new technologies and practices. SOR freezes the thinking that was prevalent at time of writing.

- In a P3 with tight or prescriptive statement of requirement or functional statements of need, innovation is stifled. The SOR becomes a check list and the end users get their check lists. Nothing more nothing less.
- Quantity of user group meetings are capped. SOR severely limits what can be incorporated onto drawings.
- Contractors are trying to maximize profit by reducing construction cost. Limitation is SOR. Quality is reduced to minimum code or minimum SOR.
- further pressure on the contractor to cut cost.

General Contractor's Perspective

- The P3 model limits the number of GCs that can participate in the bid process due to the financial investment required.
- Allows for a thorough competitive design process (usually coupled with an honorarium), where the teams present costing as well as budgets during tender, so a complete adjudication can be completed.
- Typically larger more sophisticated subcontractors who can participate due to expertise and financial rating.
- An alternative to upfront spending for a capital project, with structured payback.
- Needs a strong set of bridging documents to ensure the owner gets what they intended.
- Does not necessarily shorten time to market as bridging documents are a significant undertaking.
- The delivery model works well in a variety of circumstances in particular large value projects.
- Supports owners/users who do not have or want responsibility for maintenance.
- Demonstrating compliance is an onerous process.
- Consulting Fees are lower. To ensure a minimal profit, design recycling is almost certainly required. New technologies that require more research or implementation will likely be rejected.
- Some design responsibilities are passed over to the contractor.
- Flow of money from capital to maintenance is never as easy or fluid as it is supposed to be. A \$100K addition than could save \$500K in maintenance will not always result in \$100K being transferred to the construction side. This puts

Owner Perspective

- Project scope needs to be defined early and a clear functional program or requirements is required.
- Clarity over operations and maintenance elements (if applicable) need to be clear in the tender scope with end users/operator having input.
- Opportunity for a "value-add" component during design.

Key Procurement + Contracting Considerations

- Price still influences decisions and design/construction quality.
- Need to be clear on operating and maintenance standards up front.
- If physical changes may be required during the life of the P3, care needs to be taken with the contract terms.

Advantages

- Owner has a single contract for financing, design, construction, maintenance and potentially operation for a fixed period.
- Except for Owner changes, no change orders.
- Project schedule can be accelerated/ "Fast-tracked" if necessary.
- Owner involvement in the process is limited after selection and design.
- Budget control.
- No requirement for full capital budget at outset.

Disadvantages

- Limited owner involvement.
- Difficult to establish criteria for selection of team.
- Process may not bring best designer, engineer and builder together for owner.
- Quality control is responsibility of P3 team, no checks and balances.
- If contract is not well developed, ability to make physical changes and upgrades over contracted life can be difficult and costly.