

Project Finance and PPP



- There are no stupid questions....
- The only stupid questions are the ones not asked!

...

Any Questions?

What will we cover?



What will we cover?

- What is PPP
- Types of PPP
- Financial Instruments used in PPP
- Stakeholder engagement
- Negotiating
- Advantages/Disadvantages of PPP
- PPP in action
 - Carillion Case Study

- Performance & output based procurements
- Risk Management
- Quality Procurement Management
- Quality Management
- Managing relationships

PPP



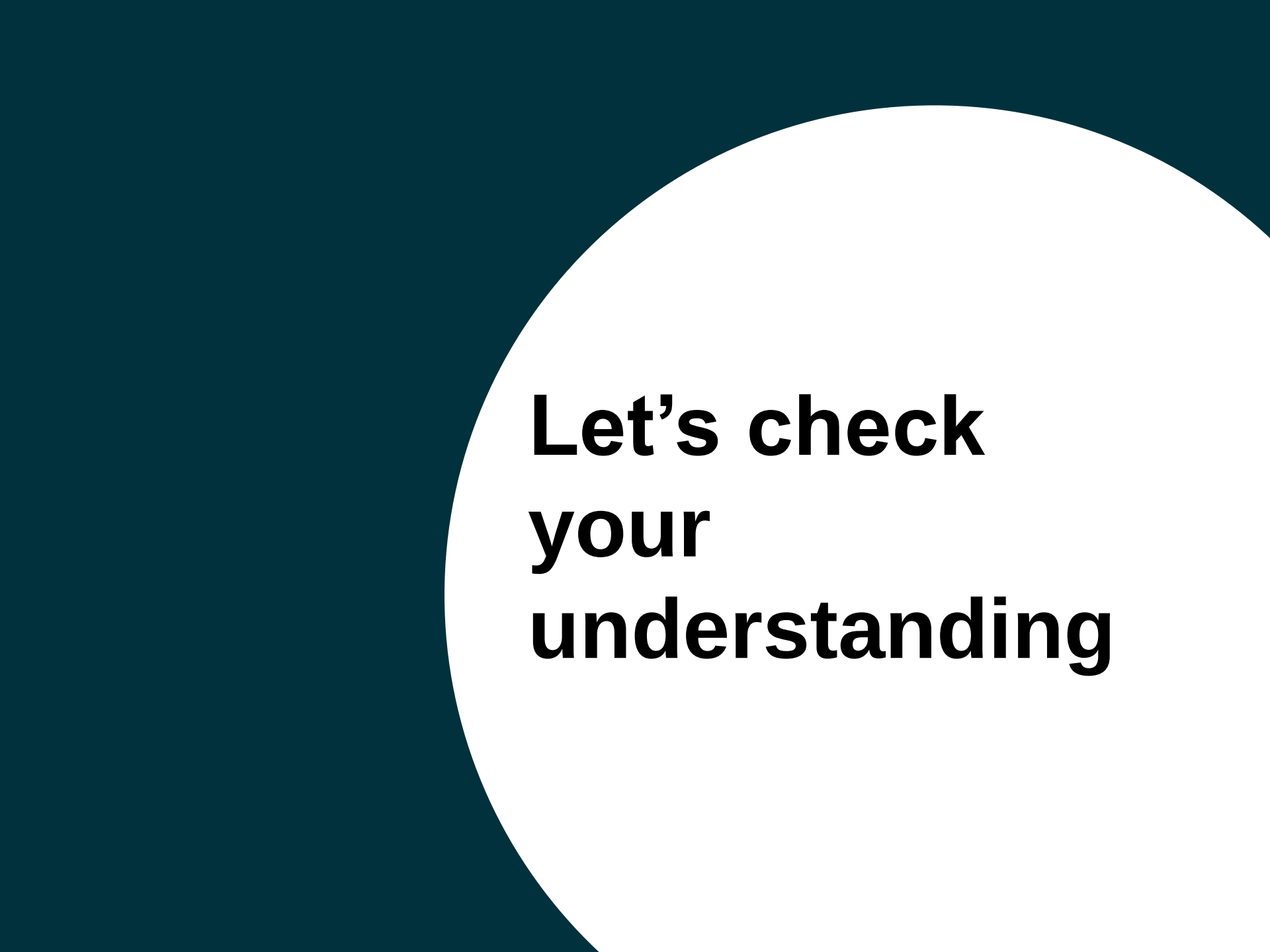
What is PPP?



“

What takes the government 50 years to achieve can be done by the private sector in a tenth of the time”

- Milton Friedman



**Let's check
your
understanding**



**What is
PPP?**

P3s

A business relationship between a private-sector company and a government agency for the purpose of completing a project that will serve the public.

What is PPP?

- Public-private partnerships can be used to finance, build and operate many different projects
- Financing a project through a public-private partnership can allow a project to be completed sooner or make it a possibility in the first place.



**Why use
PPP?**

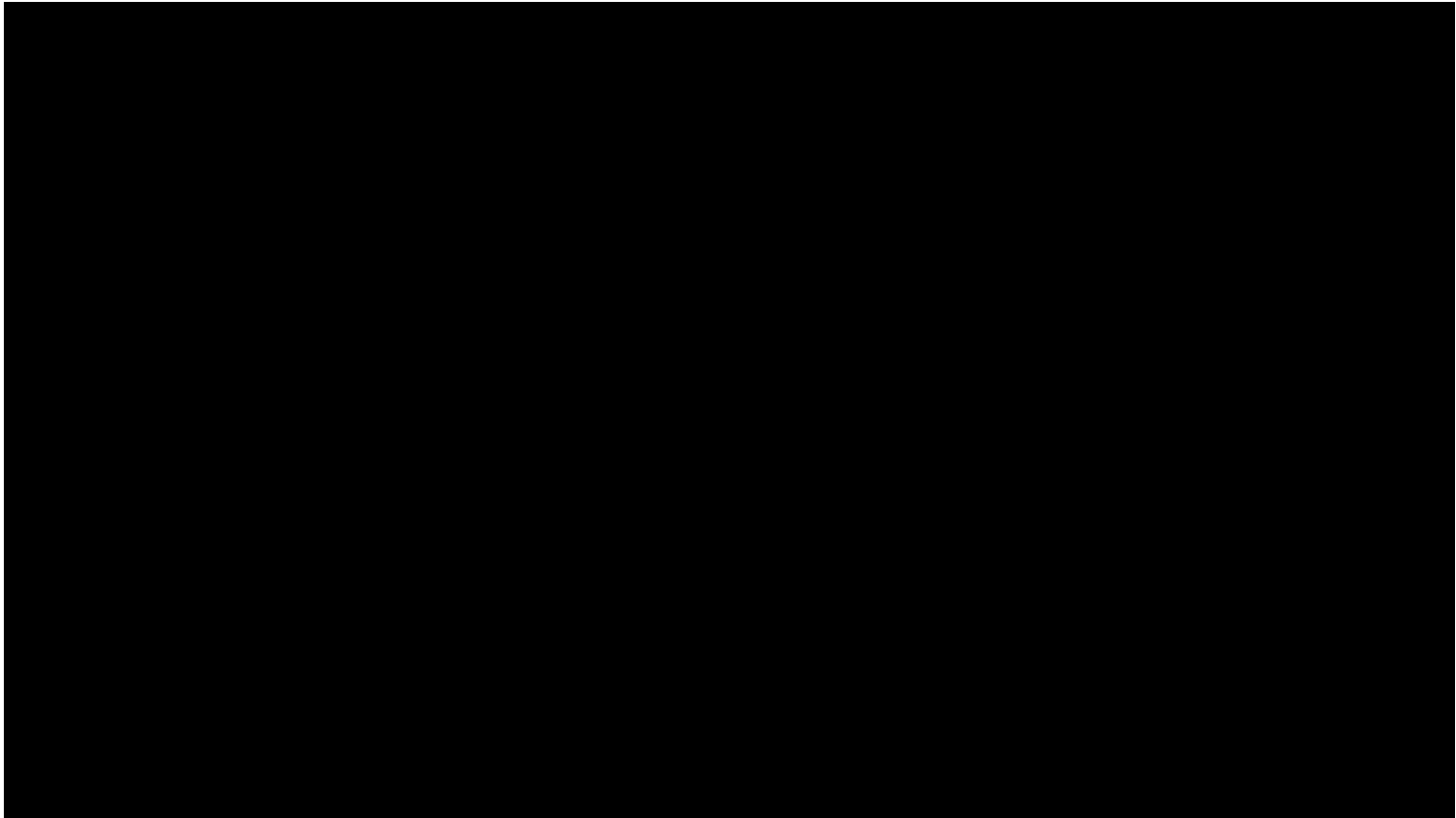
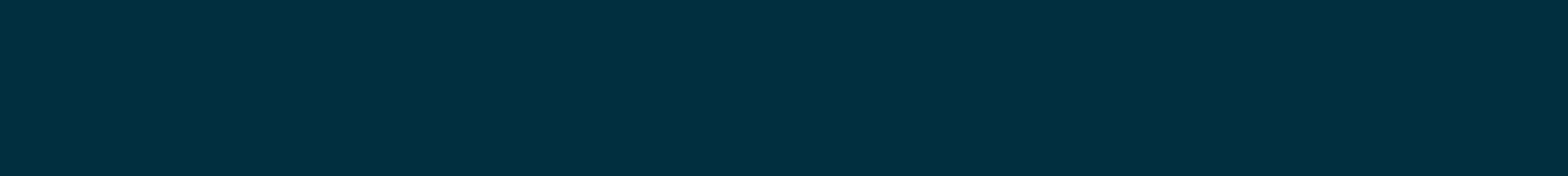
- **There are usually two fundamental drivers for PPPs.**
- Firstly, PPPs enable the public sector to harness the expertise and efficiencies that the private sector can bring to the delivery of certain facilities and services traditionally procured and delivered by the public sector.
- Secondly, a PPP is structured so that the public sector body seeking to make a capital investment does not incur any borrowing.
 - Rather, the PPP borrowing is incurred by the private sector vehicle implementing the project and therefore, from the public sector's perspective, a PPP is an "off-balance sheet" method of financing the delivery of new or refurbished public sector assets.

What is PPP?

- Public-private partnerships often use private-sector investments to finance a public project when sufficient public funding is not available.
- For example, a city government might be heavily indebted, but a private enterprise might be interested in funding the project's construction in exchange for receiving the operating profits once the project is complete.

- Public-private partnerships refer to the private sector financing, designing, building, maintaining and operating infrastructure assets traditionally provided by the public sector.

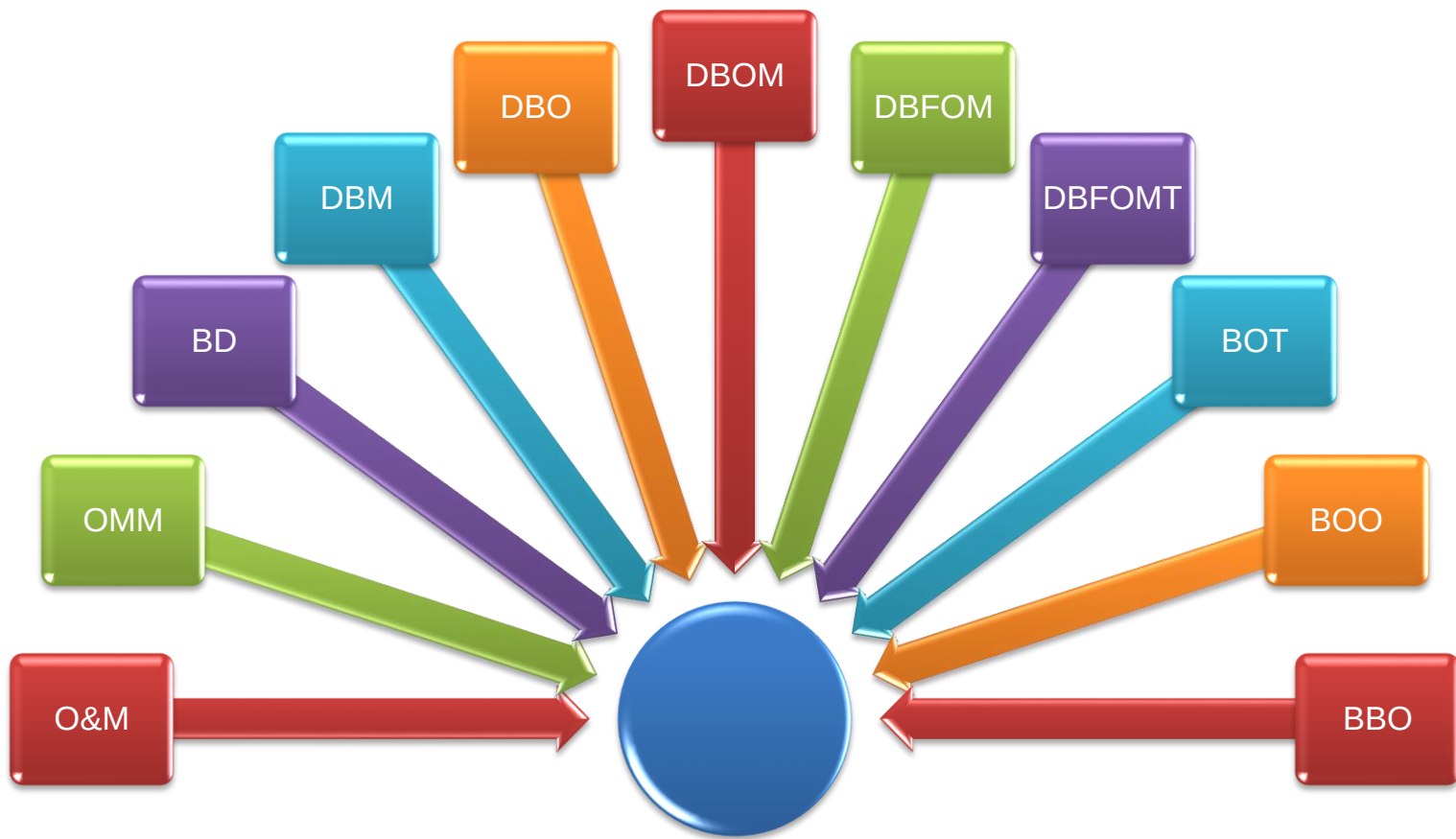
- **Public-private partnerships have become a trendy way to finance projects**



Types of PPP



**Types of
PPP: list as
many as you
can to
discuss**



- **O&M: Operations and Maintenance**
- A public partner (federal, state, or local government agency or authority) contracts with a private partner to provide and/or maintain a specific service.
- Under the private operation and maintenance option, the public partner retains ownership and overall management of the public facility or system.

- **OMM: Operations, Maintenance & Management**
- A public partner (federal, state, or local government agency or authority) contracts with a private partner to operate, maintain, and manage a facility or system providing a service.
- Under this contract option, the public partner retains ownership of the public facility or system, but the private party may invest its own capital in the facility or system. Any private investment is carefully calculated in relation to its contributions to operational efficiencies and savings over the term of the contract.
- Generally, the longer the contract term, the greater the opportunity for increased private investment because there is more time available in which to recoup any investment and earn a reasonable return. Many local governments use this contractual partnership to provide wastewater treatment services.

- **DB: Design-Build**
- A DB is when the private partner provides both design and construction of a project to the public agency.
- This type of partnership can reduce time, save money, provide stronger guarantees and allocate additional project risk to the private sector.
- It also reduces conflict by having a single entity responsible to the public owner for the design and construction. The public sector partner owns the assets and has the responsibility for the operation and maintenance.

- **DBM: Design-Build-Maintain**
- A DBM is similar to a DB except the maintenance of the facility for some period of time becomes the responsibility of the private sector partner.
- The benefits are similar to the DB with maintenance risk being allocated to the private sector partner and the guarantee expanded to include maintenance. The public sector partner owns and operates the assets.

- **DBO: Design-Build-Operate**

- A single contract is awarded for the design, construction, and operation of a capital improvement.
- Title to the facility remains with the public sector unless the project is a design/build/operate/ transfer or design/build/own/operate project.
- The DBO method of contracting is contrary to the separated and sequential approach ordinarily used in the United States by both the public and private sectors.
- This method involves one contract for design with an architect or engineer, followed by a different contract with a builder for project construction, followed by the owner's taking over the project and operating it.

- A simple design-build approach creates a single point of responsibility for design and construction and can speed project completion by facilitating the overlap of the design and construction phases of the project.
- On a public project, the operations phase is normally handled by the public sector under a separate operations and maintenance agreement.
- Combining all three passes into a DBO approach maintains the continuity of private sector involvement and can facilitate private-sector financing of public projects supported by user fees generated during the operations phase.

- **DBOM: Design-Build-Operate-Maintain**
- The design-build-operate-maintain (DBOM) model is an integrated partnership that combines the design and construction responsibilities of design-build procurements with operations and maintenance.
- These project components are procured from the private section in a single contract with financing secured by the public sector.
- The public agency maintains ownership and retains a significant level of oversight of the operations through terms defined in the contract.

- **DBFOM: Design-Build-Finance-Operate-Maintain**
- With the Design-Build-Finance-Operate-Maintain (DBFOM) approach, the responsibilities for designing, building, financing, operating and maintaining are bundled together and transferred to private sector partners.
- There is a great deal of variety in DBFOM arrangements in the United States, and especially the degree to which financial responsibilities are actually transferred to the private sector.
- One commonality that cuts across all DBFOM projects is that they are either partly or wholly financed by debt leveraging revenue streams dedicated to the project.

- Direct user fees (tolls) are the most common revenue source. However, others ranging from lease payments to shadow tolls and vehicle registration fees.
- Future revenues are leveraged to issue bonds or other debt that provide funds for capital and project development costs.
- They are also often supplemented by public sector grants in the form of money or contributions in kind, such as right-of-way. In certain cases, private partners may be required to make equity investments as well.
- Value for money can be attained through life-cycle costing.

- **DBFOMT: Design-Build-Finance-Operate-Maintain-Transfer**
- The Design-Build-Finance-Operate-Maintain-Transfer (DBFOMT) partnership model is the same as a DBFOM except that the private sector owns the asset until the end of the contract when the ownership is transferred to the public sector.
- While common abroad, DBFOMT is not often used in the United States today.

- **BOT: Build-Operate-Transfer**
- The private partner builds a facility to the specifications agreed to by the public agency, operates the facility for a specified time period under a contract or franchise agreement with the agency, and then transfers the facility to the agency at the end of the specified period of time.
- In most cases, the private partner will also provide some, or all, of the financing for the facility, so the length of the contract or franchise must be sufficient to enable the private partner to realize a reasonable return on its investment through user charges.

- At the end of the franchise period, the public partner can assume operating responsibility for the facility, contract the operations to the original franchise holder, or award a new contract or franchise to a new private partner.
- The BTO model is similar to the BOT model except that the transfer to the public owner takes place at the time that construction is completed, rather than at the end of the franchise period.

- **BOO: Build-Own-Operate**
- The contractor constructs and operates a facility without transferring ownership to the public sector. Legal title to the facility remains in the private sector, and there is no obligation for the public sector to purchase the facility or take title.
- A BOO transaction may qualify for tax-exempt status as a service contract if all Internal Revenue Code requirements are satisfied.

- **BBO: Buy-Build-Operate**
- A BBO is a form of asset sale that includes a rehabilitation or expansion of an existing facility.
- The government sells the asset to the private sector entity, which then makes the improvements necessary to operate the facility in a profitable manner.

- **Developer Finance**

- The private party finances the construction or expansion of a public facility in exchange for the right to build residential housing, commercial stores, and/or industrial facilities at the site.
- The private developer contributes capital and may operate the facility under the oversight of the government.
- The developer gains the right to use the facility and may receive future income from user fees.

- While developers may in rare cases build a facility, more typically they are charged a fee or required to purchase capacity in an existing facility.
- This payment is used to expand or upgrade the facility. Developer financing arrangements are often called capacity credits, impact fees, or extractions.
- Developer financing may be voluntary or involuntary depending on the specific local circumstances.

- **EUL: Enhanced Use Leasing or Underutilized Asset**
- An EUL is an asset management program in the Department of Veterans Affairs (VA) that can include a variety of different leasing arrangements (e.g. lease/develop/operate, build/develop/operate).
- EULs enable the VA to long-term lease VA-controlled property to the private sector or other public entities for non-VA uses in return for receiving fair consideration (monetary or in-kind) that enhances VA's mission or programs.

- **LDO or BDO: Lease-Develop-Operate or Build-Develop-Operate**
- Under these partnerships arrangements, the private party leases or buys an existing facility from a public agency; invests its own capital to renovate, modernize, and/or expand the facility; and then operates it under a contract with the public agency.
- A number of different types of municipal transit facilities have been leased and developed under LDO and BDO arrangements.

- **Lease/Purchase**
- A lease/purchase is an installment-purchase contract. Under this model, the private sector finances and builds a new facility, which it then leases to a public agency.
- The public agency makes scheduled lease payments to the private party.
- The public agency accrues equity in the facility with each payment.
- At the end of the lease term, the public agency owns the facility or purchases it at the cost of any remaining unpaid balance in the lease.

- Under this arrangement, the facility may be operated by either the public agency or the private developer during the term of the lease.
- Lease/purchase arrangements have been used by the General Services Administration for building federal office buildings and by a number of states to build prisons and other correctional facilities.

- **Sale/Leaseback**

- This is a financial arrangement in which the owner of a facility sells it to another entity, and subsequently leases it back from the new owner.
- Both public and private entities may enter into sale/leaseback arrangements for a variety of reasons.
- An innovative application of the sale/leaseback technique is the sale of a public facility to a public or private holding company for the purposes of limiting governmental liability under certain statutes.
- Under this arrangement, the government that sold the facility leases it back and continues to operate it.

- **Tax-Exempt Lease**
- A public partner finances capital assets or facilities by borrowing funds from a private investor or financial institution.
- The private partner generally acquires title to the asset, but then transfers it to the public partner either at the beginning or end of the lease term.
- The portion of the lease payment used to pay interest on the capital investment is tax exempt under state and federal laws.
- Tax-exempt leases have been used to finance a wide variety of capital assets, ranging from computers to telecommunication systems and municipal vehicle fleets.

- **Turnkey**

- A public agency contracts with a private investor/vendor to design and build a complete facility in accordance with specified performance standards and criteria agreed to between the agency and the vendor.
- The private developer commits to build the facility for a fixed price and absorbs the construction risk of meeting that price commitment.
- Generally, in a turnkey transaction, the private partners use fast-track construction techniques (such as design-build) and are not bound by traditional public sector procurement regulations.
- This combination often enables the private partner to complete the facility in significantly less time and for less cost than could be accomplished under traditional construction techniques.

- In a turnkey transaction, financing and ownership of the facility can rest with either the public or private partner.
- For example, the public agency might provide the financing, with the attendant costs and risks. Alternatively, the private party might provide the financing capital, generally in exchange for a long-term contract to operate the facility.

Politics and PPP



- As you would suspect, PPP is highly political
- Each political party has their own agenda over PPPs
- PPPs, PFIs have been somewhat regarded as 'gravy trains' for investors



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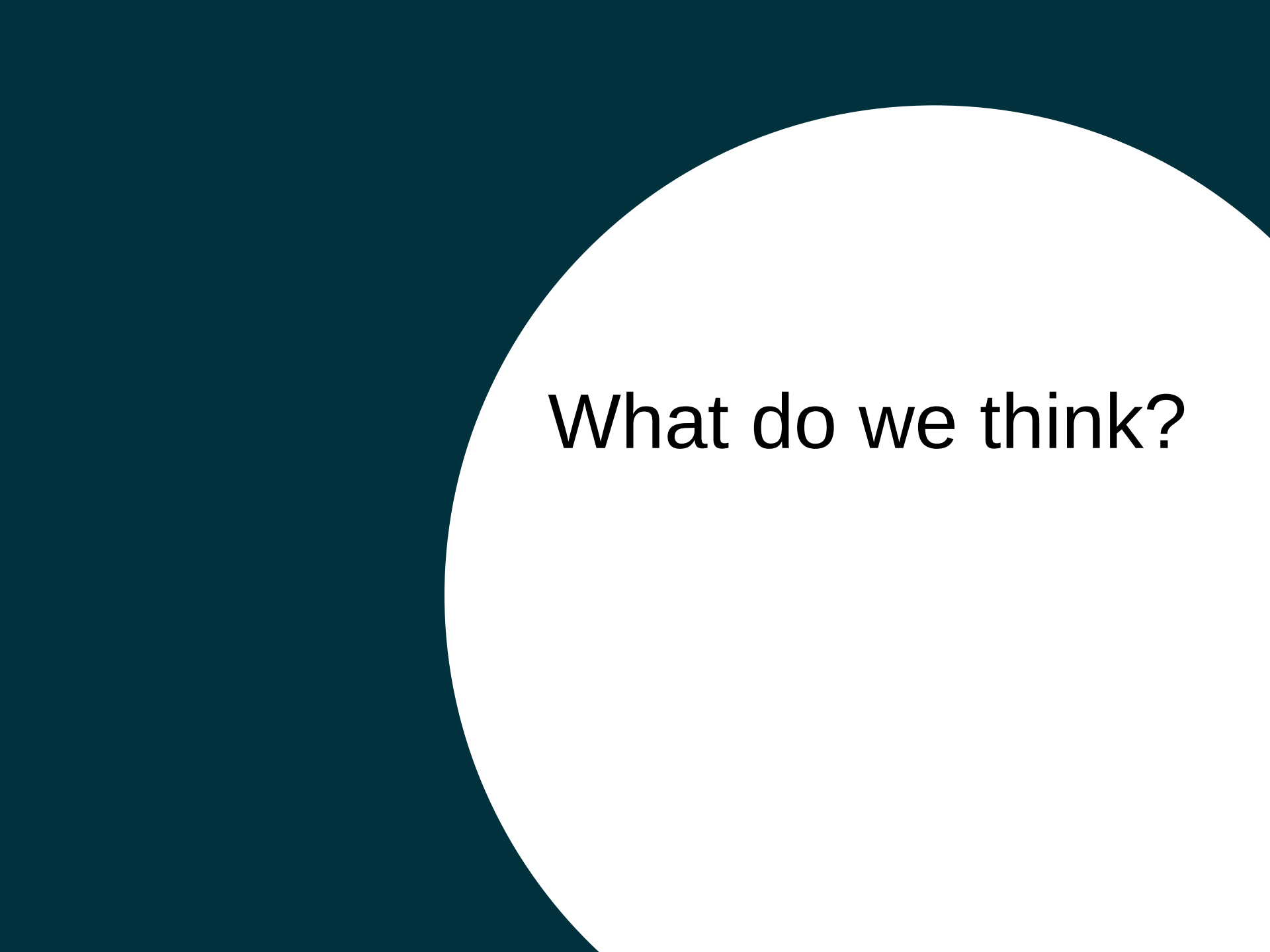
Whiteboard

The public-private partnership

marketplace.org







What do we think?

PPP in practice



- **Highway example – usual arrangements**
 - Government borrows money or Tax Public, pays to get a Highway built, Public uses the facility for free but pay in form of Increased Tax
- **PPP arrangement**
 - Private firm borrows money, builds Highway, Public pay fee to use the highway, Firm hands over the property to Govt. after say 20 years

PPP... global examples

- **Canada**
 - 407 ETR Toll road, Toronto
 - The Royal Ottawa Hospital
 - The William Osler Hospital, Brampton
 - The Viva Bus Rapid Transit network, York
 - Confederation Bridge, Prince Edward Island
- **India**
 - [NISG](#), Hyderabad..

PPP... global examples

- **United States**

- [California Fuel Cell Partnership](#) (CaFCP)
- [California State Route 125](#), San Diego, California
- [Central Park](#), New York City
- [Chicago Skyway](#) Bridge, [Chicago](#), Illinois
- [Indiana East-West Toll Road](#), ([Interstate 80/Interstate 90](#)), Northern Indiana
- [Southern Indiana Toll Road](#), ([Interstate 69](#), [proposed](#)), Martinsville to Evansville, Indiana
- [Las Vegas Monorail](#), Nevada

PPP... global examples

- **United Kingdom**
 - Private Finance Initiative
 - The maintenance of London Underground (since 2003)
 - National Air Traffic Services (NATS) (since 2001)
 - Some NHS hospitals and other agencies
 - Schools
 - Firrhill High School
 - Williamwood High School

- Carillion are supporters of PPP
 - Take time to see what you can find on their projects and report back

**Project Status: Operational****Project Description:**

Design, Build, Finance and Operate a major North-South trunk road carrying traffic from London to Edinburgh.

The project involves the upgrading of 21 km of road from Alconbury to Peterborough to motorway standard, bypassing the towns and villages on the route so easing congestion and reducing traffic levels that had previously caused high levels of pollution and delays.

The motorway was constructed on programme and was fully opened to traffic in December 1998.

The maintenance provision includes road surfacing, street lighting, structures and soft landscaping.

Payments are based upon shadow toll principles.

The project supports the Highways Agency's objective of upgrading the whole of the A1 between London and Newcastle upon Tyne to motorway standard.

LOCATION

Cambridgeshire

CLIENT

Highways Agency

CONCESSION AWARD

March 1996

CONCESSION PERIOD

30 Years

CONSTRUCTION PERIOD

33 months

START OF SERVICE

December 1998

FUNDING REQUIREMENT

£202M

EQUITY PROVIDERS

Carillion Private Finance, Abertis, KBR & Land Securities Trillium

SOURCE OF DEBT

European Investment Bank (Debt Financing)
Warburg UBS & Lehman Bros (Bond)
MBIA & AMBAC (Monoline)

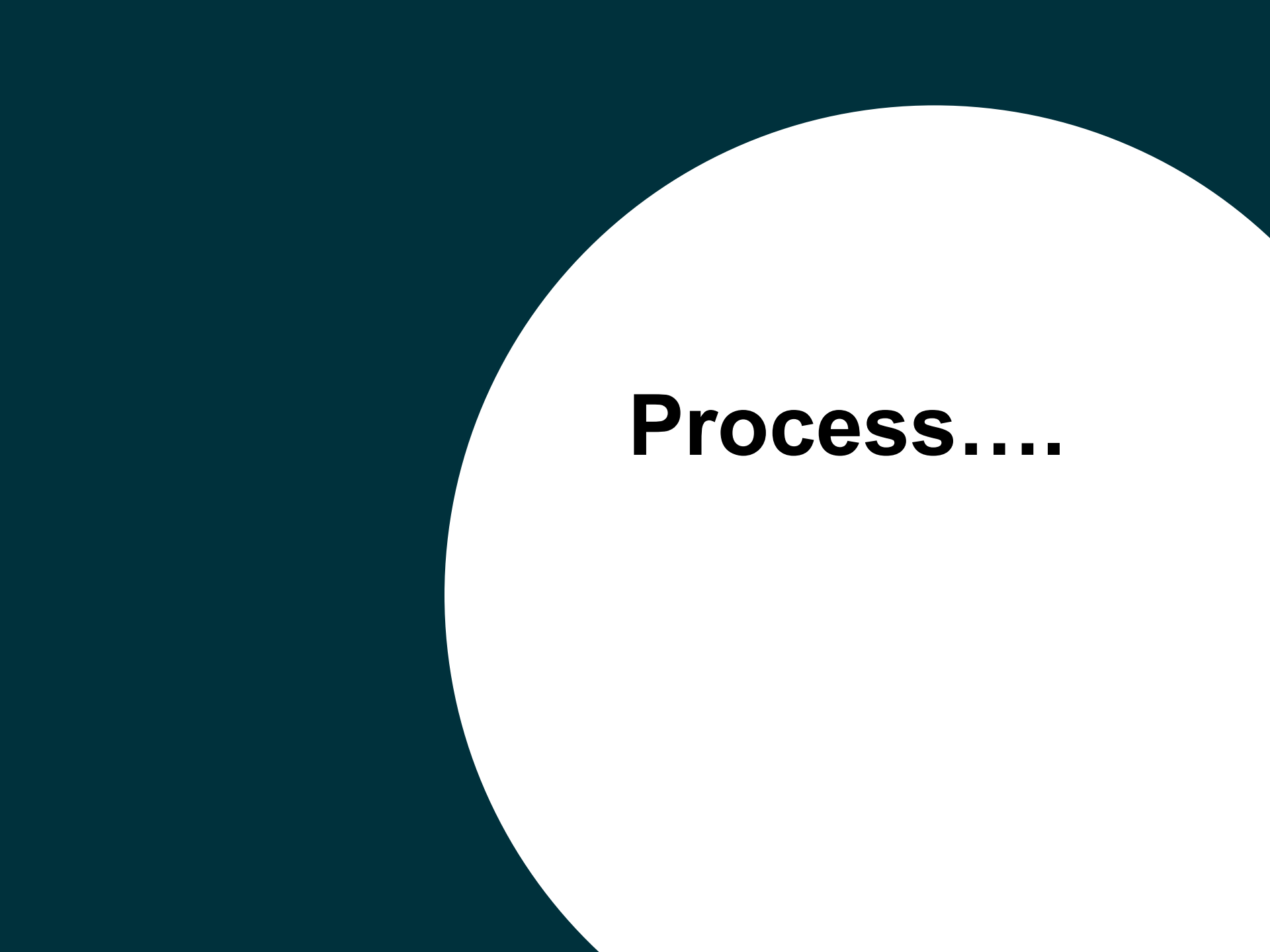
- Carillion are big partners of PPP/PFI
 - Military accommodation
 - £1.2bn
 - Have also built the secure Government Communications Headquarters (GCHQ) at Cheltenham.
 - This has been one of the largest and most technically complex PPP projects in the UK to date.

- Carillion has been a leader in PPP projects since the inception of the UK's Private Finance Initiative in the early 1990s.
- Our PPP projects contracts include the delivery of schools and academies, hospitals/healthcare facilities, and major road projects.

Project	Cost	Concession
• Southmead Hospital	£48.7m	30
years		
• Allenby Connaught	£15.0m	35 years

Some examples to read

- The Channel Tunnel Rail Link (CTRL)
- Beiras Litoral and Alta Shadow Toll Road, Portugal
- M5 toll motorway, Hungary
- Perpignan—Figueiras Rail Concession, cross-border link between France and Spain
- Trakia Motorway Project, Bulgaria



Process....

- Bidding process.
- A public sector entity (usually a central government body/local authority) will identify the need to deliver a particular project, such as building a railway line or a hospital.
- The public entity will advertise the need for such a project and then run a competitive process under which private sector entities will "bid" in order to win the right to deliver the project.
- The winning private sector bidder is then awarded a "Concession" to implement its solution.

- Project Company.
- A private sector entity will contract with the public entity and raise funds from investors and lenders in order to deliver the project (the "Project Company")
- Usually, a new, separate, private company will be set up to be the Project Company in order to insulate the private sector sponsors of the project from the risk of insolvency if the project fails.
- This new company is known as a "special purpose vehicle" (an "SPV").

- Sponsor
- The activities of the Project Company will be managed by one or more private sector companies (the "Sponsor").
- Typically, the Project Company is set up as a direct/indirect subsidiary of the Sponsor.
- The Sponsors are usually the equity investment divisions of large construction or facilities management companies who want their construction or facilities management divisions to deliver the project.
- This arrangement will be documented in a "Shareholders' Agreement".

- Documentation.
- The Project Company will enter into a contract with the public sector (the "Concession Agreement").
- This is the key document detailing the terms and conditions of the project.

- Contractors
- The Project Company will enter into contracts to enable it to implement the project as it will typically have no employees.
- There will usually be one entity who is made responsible for the delivery of the facilities management services detailed in the Concession Agreement (the "FM Contractor")
- and another entity who is made responsible for the provision of the construction works detailed in the Concession Agreement (the "Construction Contractor").
- Certain responsibilities may be sub-contracted to other more specialist entities (the "Sub-Contractors").

- Funding.
- The Project Company will obtain private funding in order to finance the PPP.
- Usually, funds are made up of a mix of investments by Sponsors (usually a small proportion of the overall debt) and loans from outside lenders (the "Lenders").
- The Lenders will enter into "Financing Agreements" and "Security Agreements" with the Project Company, under which they agree to lend in return for security over the project.
- There will often also be "Direct Agreements".
- Project finance is provided on the strength of the cashflows of the Project Company, therefore the Concession Agreement is key.
- The payments made by the public sector entity are the sole income stream into the Project Company so if the Concession Agreement is terminated, the Project Company will have no means of repaying its debts.

Lenders may include commercial banks with experience in project finance, export credit agencies ("ECAs"), multi-lateral agencies ("MLAs") and development finance institutions ("DFIs"):

Export Credit Agencies

- ECAs are governmental or quasi-governmental institutions.
- ECAs provide finance to promote national exports.
- An ECA can act either as a guarantor, an insurer or a lender.
- They have different models and they can be government institutions (e.g. ECGD, K-EXIM) or private companies operating on behalf of the government (e.g. Hermes, COFACE).

multi-lateral agencies

- MLAs are governmental institutions owned by a number of governments.
- Whereas an ECA's prime aim is to support national economic interests, an MLA's mandate is to further economic development in developing countries.
- Major MLAs include the Asian Development Bank and African Development Bank.

development finance institutions

- DFIs provide long-term development finance for private sector enterprises in developing countries.
- Examples include DEG (Germany) and FMO (Netherlands).

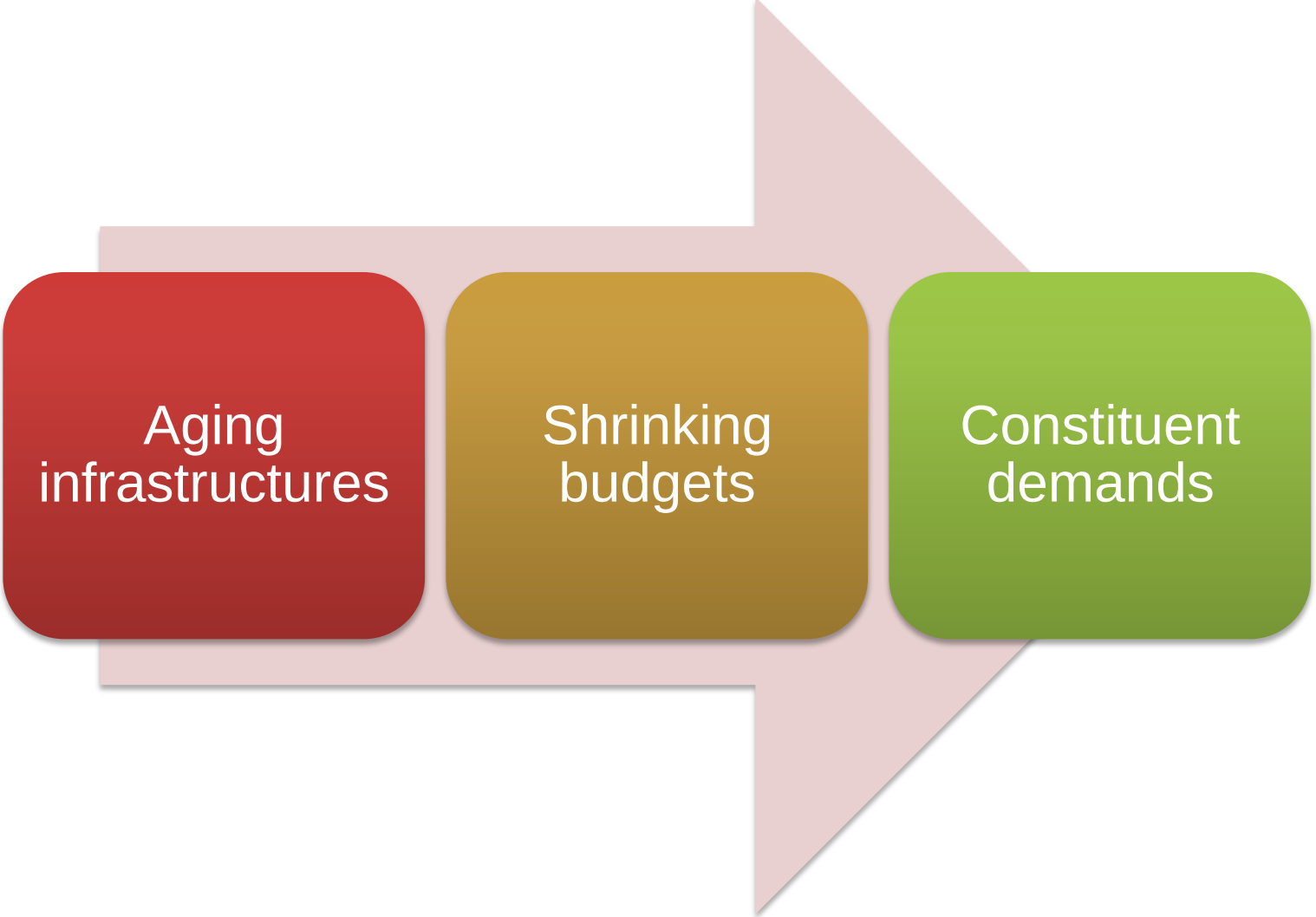
- When governments want to build a road, they typically use a process called design-bid-build:
- Engineers, working for the government or on a contract, design a project, and then construction firms bid for the right to build different pieces of it.
- Governments sell municipal bonds that allow them to borrow money cheaply to pay for the work.
- The system—at least theoretically—is intended to ensure that governments get the lowest price for building infrastructure.

- With a P3, the design, financing, construction, operations and maintenance of a project can be rolled into one transaction.
- The deals are therefore incredibly complex.
- They are most common on major highway projects that cost hundreds of millions of dollars.
- Bidders are typically consortiums made up of major construction and financial firms.

Why are PPP/PFIs popular?
What is driving these arrangements?



**Many people see P3s
as a game-changer: the
best, and possibly
only, way to repair and
replace the country's
public works.**

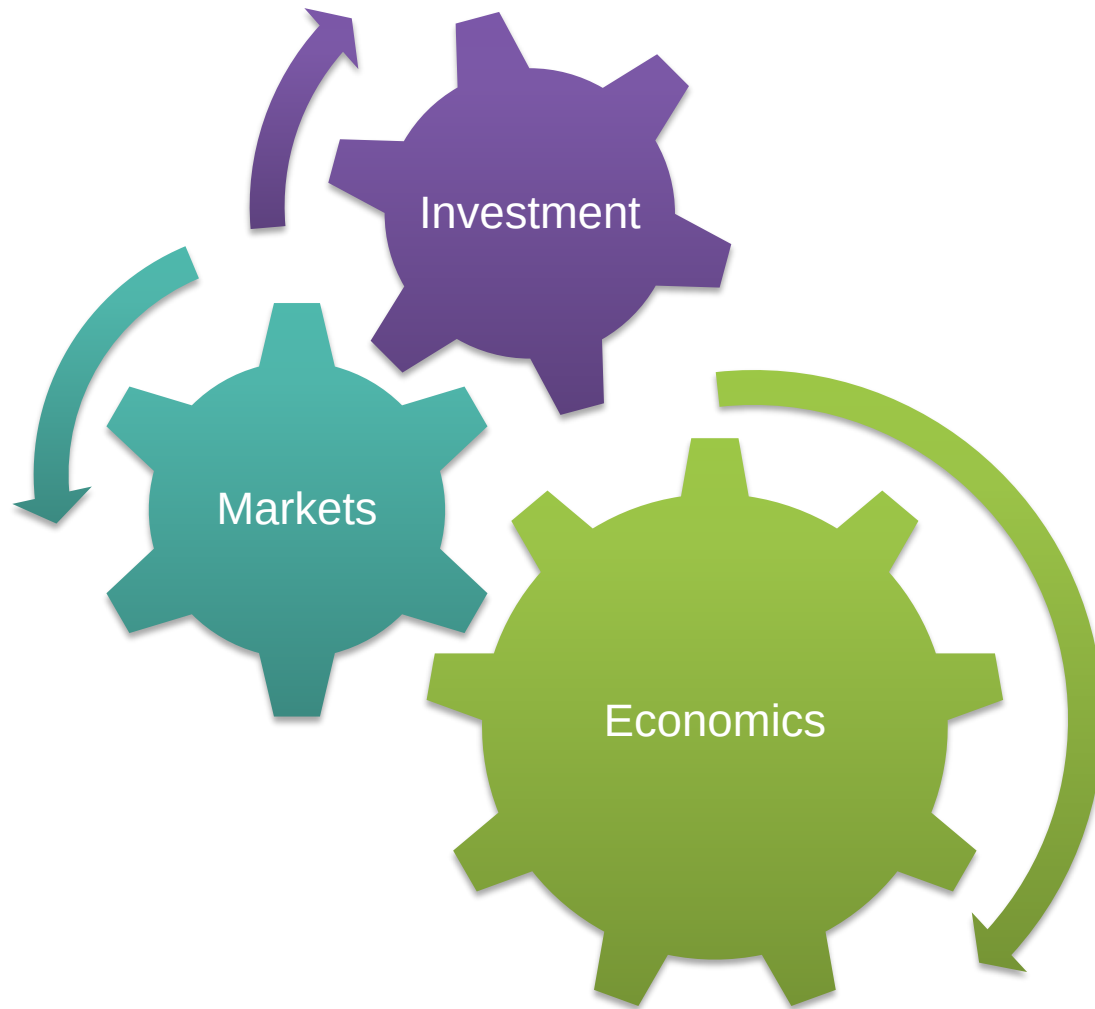


Aging
infrastructures

Shrinking
budgets

Constituent
demands

- A key advantage for the public sector is that there is no need to pay up-front for the new infrastructure.
- Instead the costs are spread over many years.
 - This has allowed extensive construction of infrastructure without substantial tax rises.
- Another advantage is the sharing of some risks.
- For example, there is a long history of delays and cost overruns in the construction of public facilities and infrastructure.
- But under PFI there is a fixed price for a fixed date of completion; if there were any overruns, the public sector would receive compensation payments.



- The growing popularity of PPP projects can be ascribed to global economic, market and investment trends:
- **Economic**
 - given the huge costs and complexity of infrastructure projects there is an obvious gap for the private sector to step into

- **Market**

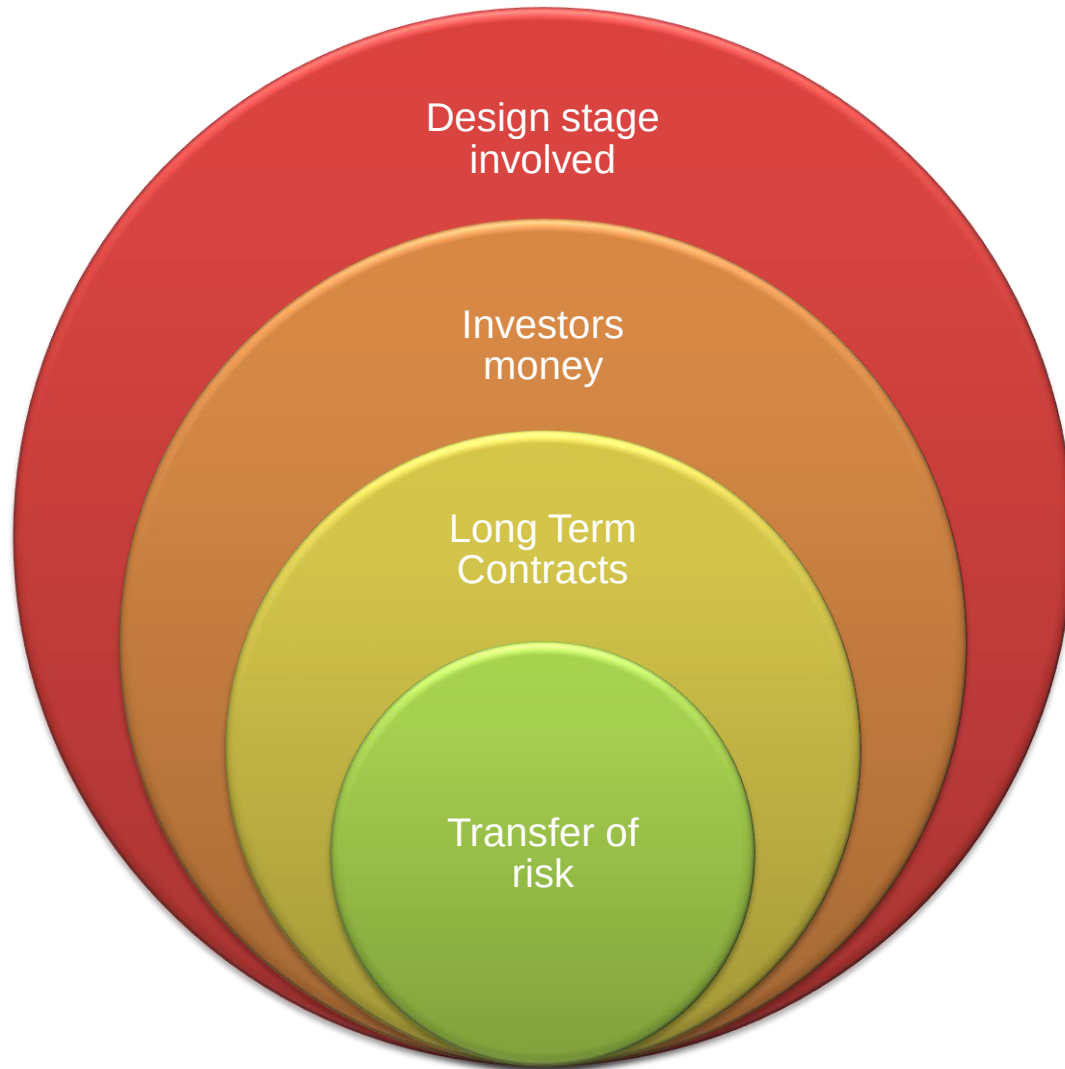
- new commercial models go beyond financing projects to allocating services to private companies through competitive bidding

- **Investment**

- infrastructure has emerged as a popular alternative investment class, offering diversification to investors.

- **PPP**
- **AN answer**
- **Not the answer**

**4 suggested
reasons for
success of
P3s**



- Advocates for P3s say they make sense for four reasons.
- First, the contractors are involved in the engineering stage of a project, which means they can design features that will promote savings over a project's lifetime.
- Second, investors have their own money in the game, so they have a major incentive to come in on budget since every overrun eats into their profits.
- Third, because the deals include long-term maintenance components, they remove the temptation of governments to defer upkeep when times get tough.
- Fourth—and perhaps most important—governments can transfer risks to the private sector, such as the possibility that construction costs are higher or toll revenue is lower than expected.

7 Stages of Success



Seven Keys to Successful PPPs

- Public Sector Champion
- Statutory Environment
- Public Sector's Organized structure
- Detailed Contract (Business Plan)
- Clearly Defined Revenue Stream
- Stakeholder Support
- Pick Your Partner Carefully

- **PUBLIC SECTOR CHAMPION:**
- Recognized public figures should serve as the spokespersons and advocates for the project and the use of a P3.
- Well-informed champions can play a critical role in minimizing misperceptions about the value to the public of an effectively developed P3.

- **STATUTORY ENVIRONMENT:**
- There should be a statutory foundation for the implementation of each partnership.
- Transparency and a competitive proposal process should be delineated in this statute.
- However, unsolicited proposals can be a positive catalyst for initiating creative, innovative approaches to addressing specific public sector needs

- **PUBLIC SECTOR'S ORGANIZED STRUCTURE:**
- The public sector should have a dedicated team for P3 projects or programs.
- This unit should be involved from conceptualization to negotiation, through final monitoring of the execution of the partnership.
- This unit should develop Requests For Proposals (RFPs) that include performance goals, not design specifications. Consideration of proposals should be based on best value, not lowest prices.
- Thorough, inclusive Value for Money (VfM) calculations provide a powerful tool for evaluating overall economic value.

- **DETAILED CONTRACT (BUSINESS PLAN):**
- A PPP is a contractual relationship between the public and private sectors for the execution of a project or service.
- This contract should include a detailed description of the responsibilities, risks and benefits of both the public and private partners.
- Such an agreement will increase the probability of success of the partnership.
- Realizing that all contingencies cannot be foreseen, a good contract will include a clearly defined method of dispute resolution.

- **CLEARLY DEFINED REVENUE STREAM:**
- While the private partner may provide a portion or all of the funding for capital improvements, there must be an identifiable revenue stream sufficient to retire this investment and provide an acceptable rate of return over the term of the partnership.
- The income stream can be generated by a variety and combination of sources (fees, tolls, availability payments, shadow tolls, tax increment financing, commercial use of underutilized assets or a wide range of additional options), but must be reasonably assured for the length of the partnership's investment period.

- **STAKEHOLDER SUPPORT:**
- More people will be affected by a partnership than just the public officials and the private sector partner.
- Affected employees, the portions of the public receiving the service, the press, appropriate labor unions and relevant interest groups will all have opinions, and may have misconceptions about a partnership and its value to all the public.
- It is important to communicate openly and candidly with these stakeholders to minimize potential resistance to establishing a partnership.

- **PICK YOUR PARTNER CAREFULLY:**
- The “best value” (not always lowest price) in a partnership is critical in maintaining the long-term relationship that is central to a successful partnership.
- A candidate’s experience in the specific area of partnerships being considered is an important factor in identifying the right partner.
- Equally, the financial capacity of the private partner should be considered in the final selection process.

Edinburgh Tram PPP Project

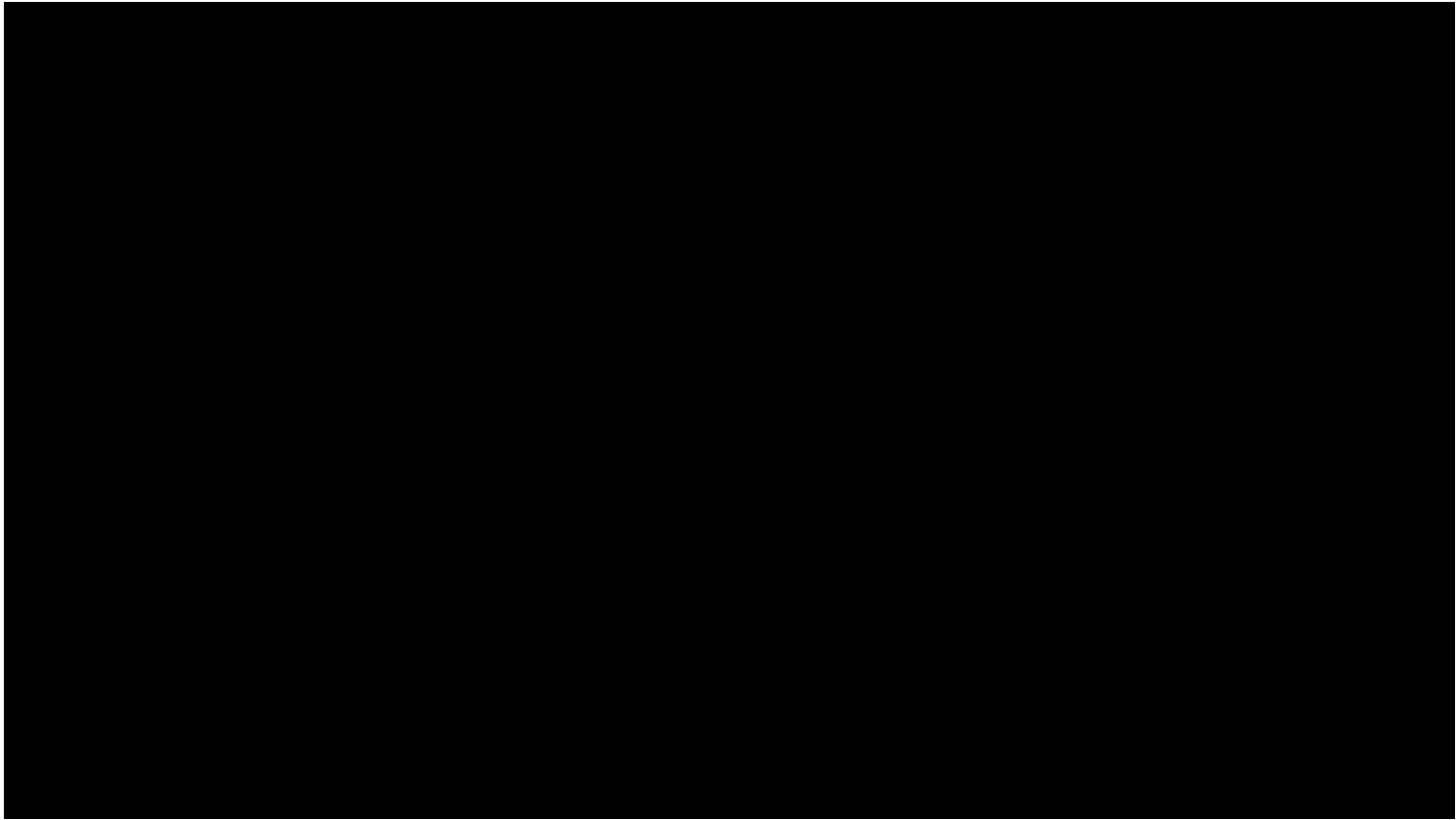
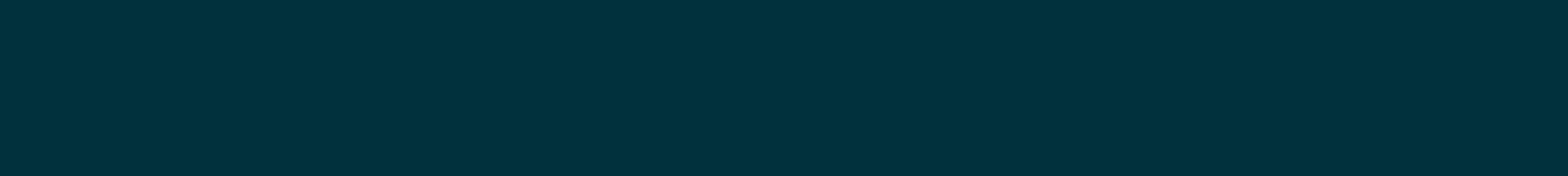






- Edinburgh Tram project is a PPP
- There has been many issues around it
- Go research and report back
 - Try Edinburgh City Council, Transport Scotland, Transport Initiative Edinburgh (Tie)

- Announced in 2003
- Construction began in 2007
- Originally set to cost £375m
- Only 28% completed by end of 2010
- In 2011 estimated to cost over £1bn
 - £228m on interest payments
- Final cost around £775m



- The good news is:
- The trams went operational in April 2014
- 1 line although
- 15 stops
- Carries approximately 90,000 passengers a week



**What
challenges?**

**“Failure to
Communicate”**

**“We Don’t Speak the
Same Language”**

But Are These Really Different?

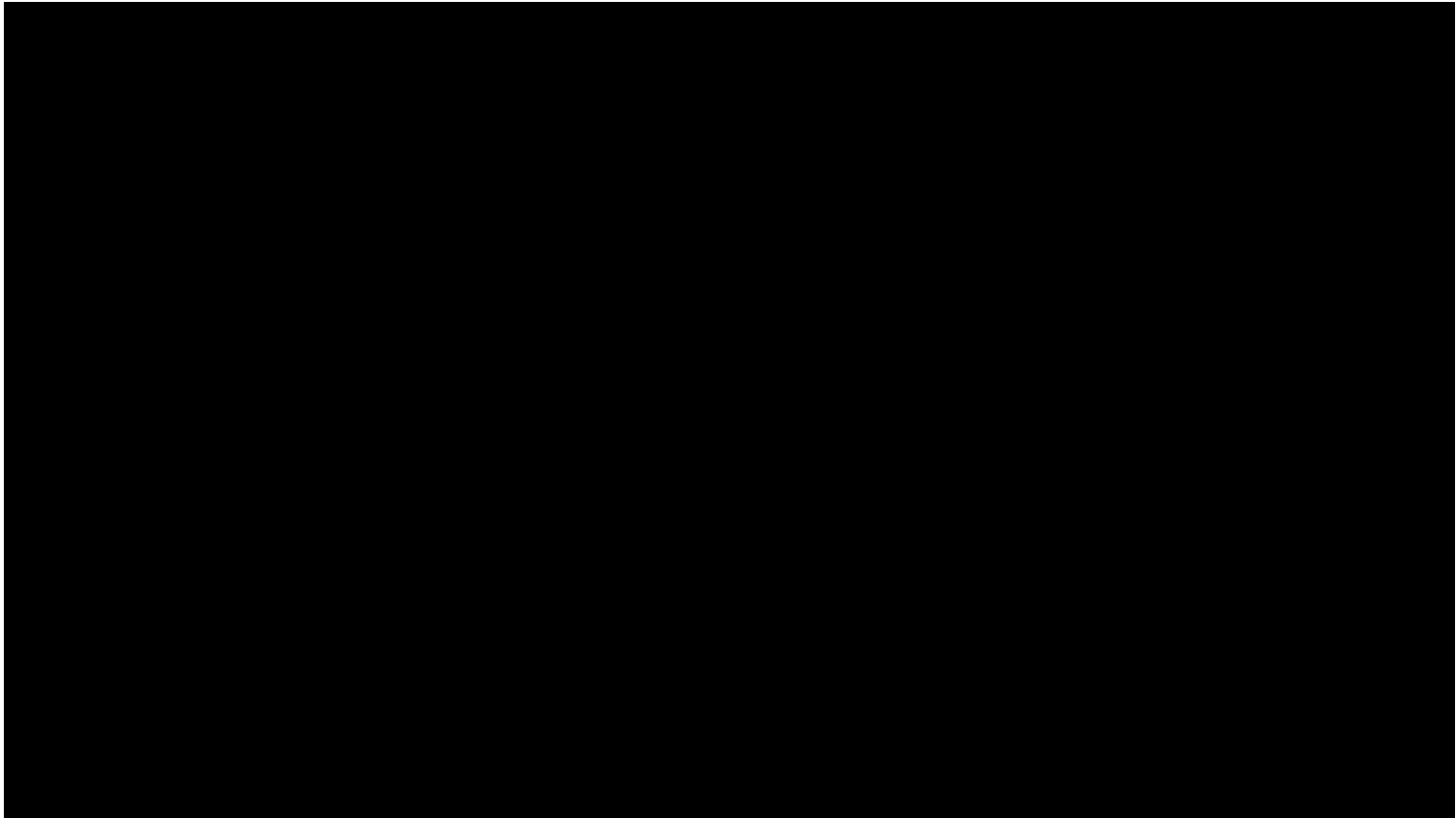
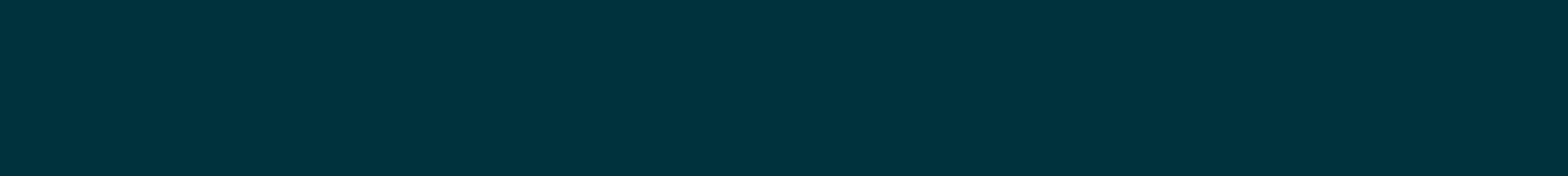


BUSINESS

Customer Satisfaction
Return on Investment
Risk/Reward Evaluation

GOVERNMENT

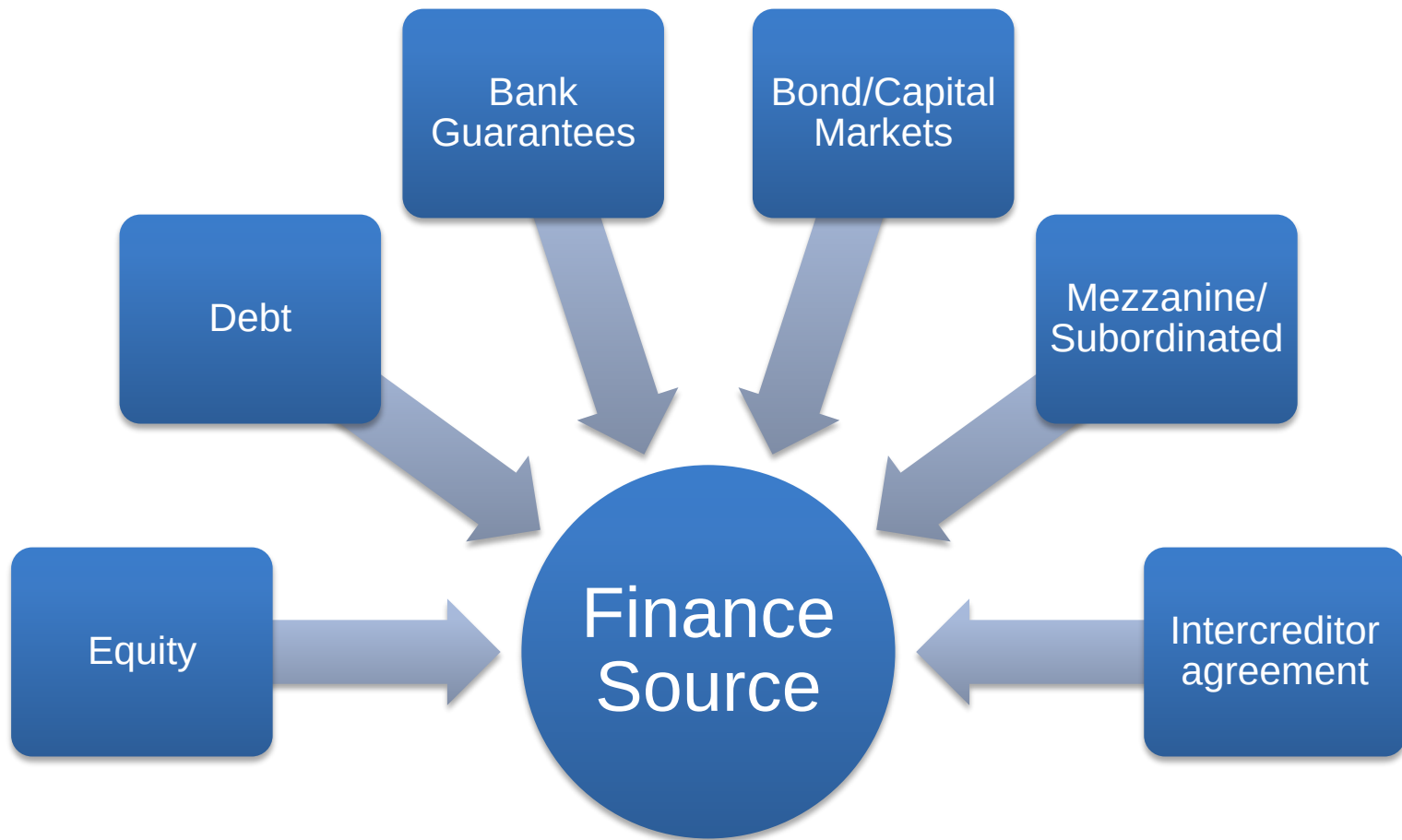
Responsibility
Accountability
Risk Avoidance



Sources of Finance



**How do you
think we
finance
PPPs?**



Equity Contributions

Debt Contributions

Bank Guarantees

Bond/Capital Markets

Mezzanine/Subordinated

Intercreditor Agreement

Advantages and Disadvantages





**What can we
think of?**

Advantages

- Investment decisions under PPP contracts tend to be based on a longterm view rather than short-term concerns.
- Risk and work are transferred to the party which is best able to manage it at the least cost, achieving best value.
- Projects go through a competitive pricing process, meaning that the cost of public services is benchmarked against market standards.
- The timings and costings tend to be more certain and therefore deliver better value for money.
 - Where PPPs are not completed to budget, the private sector usually bears the costs.

- The cross-transfer of public and private sector skills, knowledge and expertise can create innovation and efficiency.
- The private sector often brings with it greater construction capacity, labour capacity and resources than would be available to the public sector.
- Payments to the private sector in PPP projects are usually linked to how they perform, creating incentives and efficiency.
- PPP projects are not subject to political interference and deferred payments for the government.

Disadvantages

- The number of parties involved and the long-term nature of their relationships often result in complicated contracts and complex negotiations, and therefore high transaction and legal costs. PPP projects can take years to complete.
- There is a risk that the private sector party will become insolvent or make large profits during the course of the project – this can cause political problems for the public entity.
- The long-term nature of a PPP project means that debt is incurred long before the benefits appear.

- Sometimes a public sector entity could borrow more cheaply alone than it could via the private sector.
- This has to be balanced against the fact that capital expenditure incurred by a public sector body counts as government expenditure which at certain stages of the economic cycle will score against the various statistical measures of government borrowing.
- Private sector will do what it is paid to do and no more than that – therefore incentives and performance requirements need to be clearly set out in the contract.
 - Focus should be on performance requirements that are out-put based and relatively easy to monitor

Risk Management





What is Risk Management?

- The process of identification, analysis and either acceptance or mitigation of uncertainty in investment decision-making.
- Essentially, risk management occurs anytime an investor or fund manager analyzes and attempts to quantify the potential for losses in an investment and then takes the appropriate action (or inaction) given their investment objectives and risk tolerance.
- Inadequate risk management can result in severe consequences for companies as well as individuals.
- For example, the recession that began in 2008 was largely caused by the loose credit risk management of financial firms.

- Simply put, risk management is a two-step process - determining what risks exist in an investment and then handling those risks in a way best-suited to your investment objectives.
- Risk management occurs everywhere in the financial world.
- It occurs when an investor buys low-risk government bonds over more risky corporate debt, when a fund manager hedges their currency exposure with currency derivatives and when a bank performs a credit check on an individual before issuing them a personal line of credit.

Stages



- **1- Risk Identification:-**
- This is the first and the most important step of risk management.
- One cannot do anything with the risk unless and until that risk has been clearly identified.
- Risk identification starts from where the problem originates.
- Risk identification can be objective based, scenario based, taxonomy based and common risk checking.

- **2- Risk Analysis:-**

- Risk analysis includes analyzing the risk and measuring its vulnerability or its impact.
- Frequency and severity of the risk will be analyzed as well. Risk management can be quantitative as well as qualitative.
- Numerically determining the probabilities of various adverse events and expected extent of losses if any unexpected event occurs is a **Quantitative Analysis** where as defining the various threats, devising countermeasures and determining the extent of vulnerabilities is referred to as **Qualitative Risk Analysis**.

- **3- Risk Control:-**

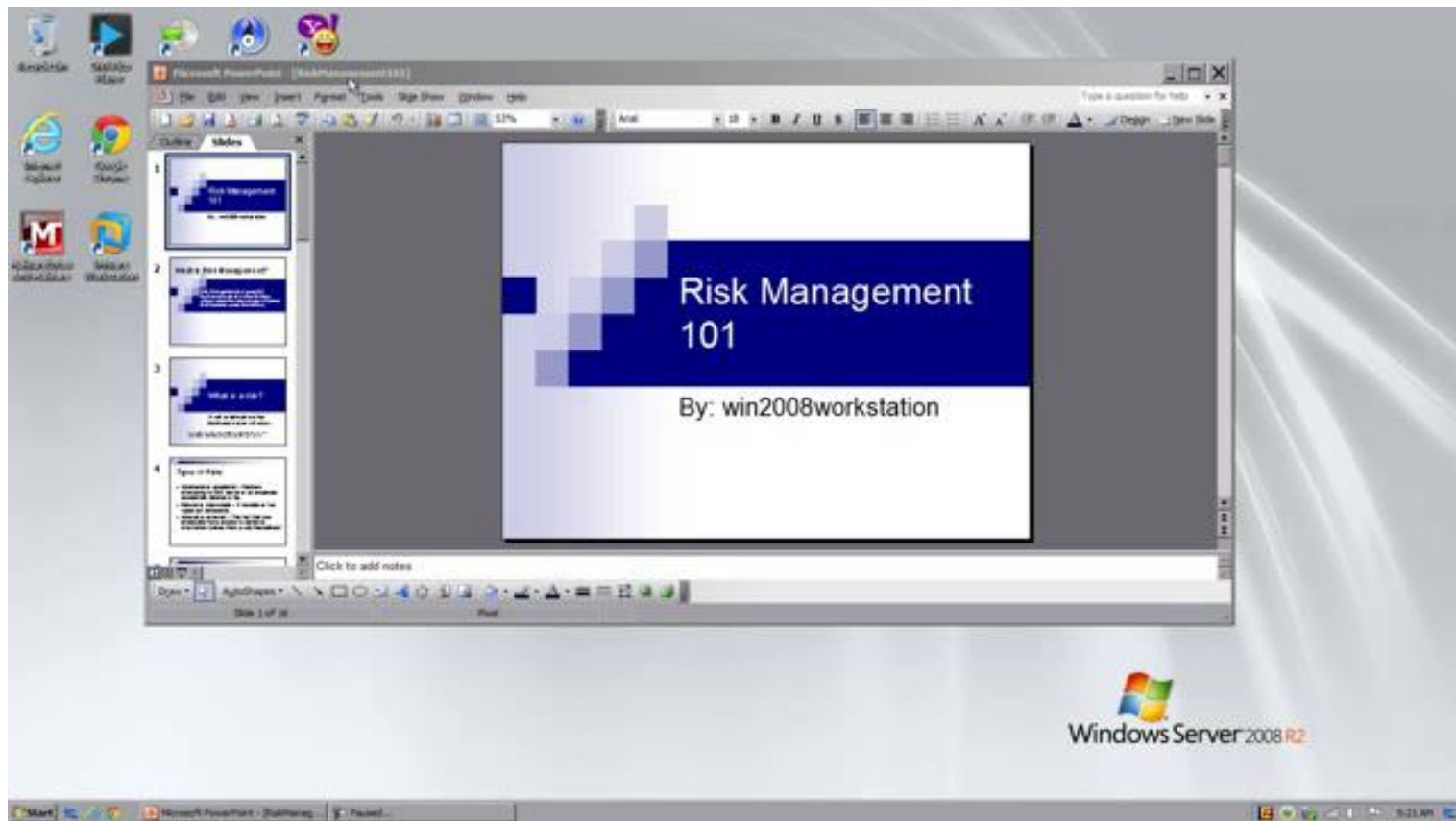
- After analyzing the risk then decided that how can the risk be controlled.
- If the risk can be controlled by in house then well and good, if not then decide on how to transfer that risk.
- Risk control is the entire process of procedures, systems, policies an organization needs to manage prudently for all the risks which are arising.

- **4- Risk Transfer:-**

- If the risk is not manageable and one cannot retain that risk, then we have to transfer that risk to a third party.
- This is the stage where insurance comes in action. Insurance will be willing to take on those risks which the organization can't handle.

- **5- Risk Review:-**
- Risk review is the last step in which all the above mentioned steps are evaluated.
- Review must be regular as the conditions and the circumstances of the business and organizations changes continuously.
- It should be monitored that the desired results of the risk management are being achieved or not and if not then identifying that where the problem occurred and then reviewing all the steps and making the changed in the management according to scenario.

- Think of a situation involving risks
- Follow the steps and prepare a report to discuss this with the group
- Identify, analysis, control, transfer and review



Soft Skills





**What do we
think these
are?**

Positive Attitude

Communication skills

Confidence

Flexibility

Empathy

Teamwork

Leadership

Good Manners

Negotiation

Sociability

The ability to teach.



**What is
communication
?**



Communication is
simply the act of
transferring
information from one
place to another

The 3 fastest means of
communication
Telephone, Television,
Tell-a-woman

That awkward moment..
When you've already
said “what?” three times
and still have no idea
what the person said,
so you just agree.

Communication



**“Dear Andy: How have you been?
Your mother and I are fine. We miss you.
Please sign off your computer and come
downstairs for something to eat. Love, Dad.”**

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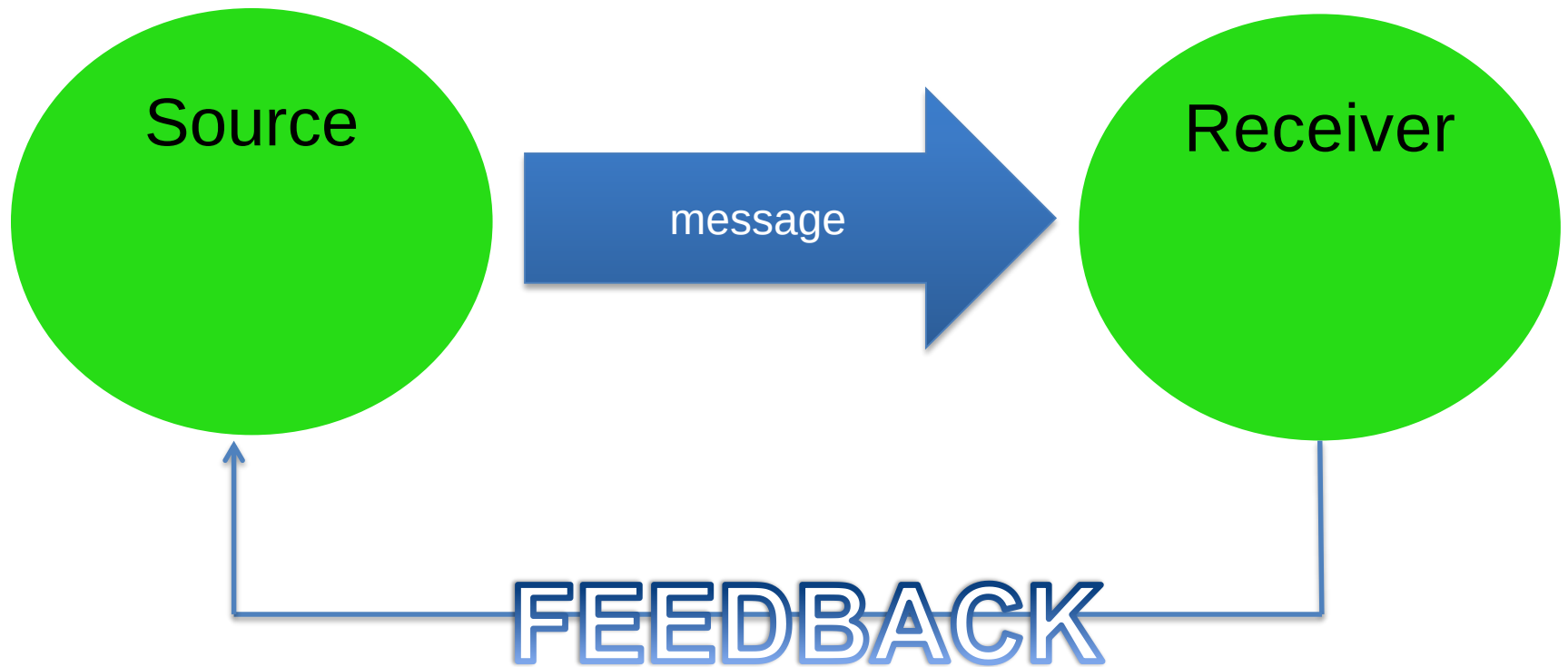
Communication Dynamics

Sending and receiving



Communication dynamics

- Communication between two people consists of transmitting and receiving
- If both parties are performing both tasks effectively, there is good communication

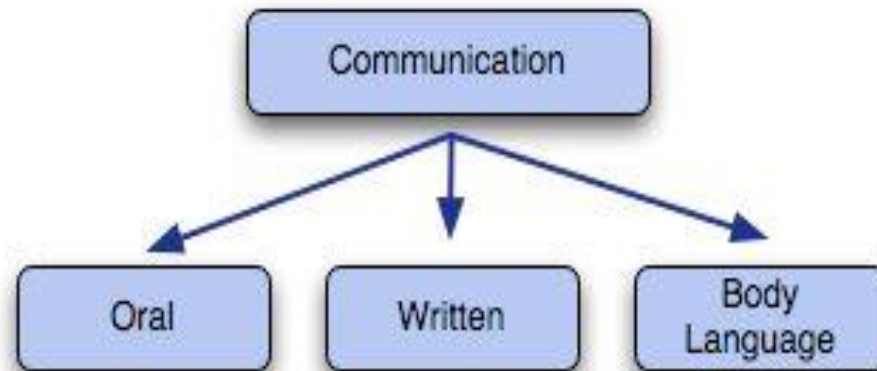


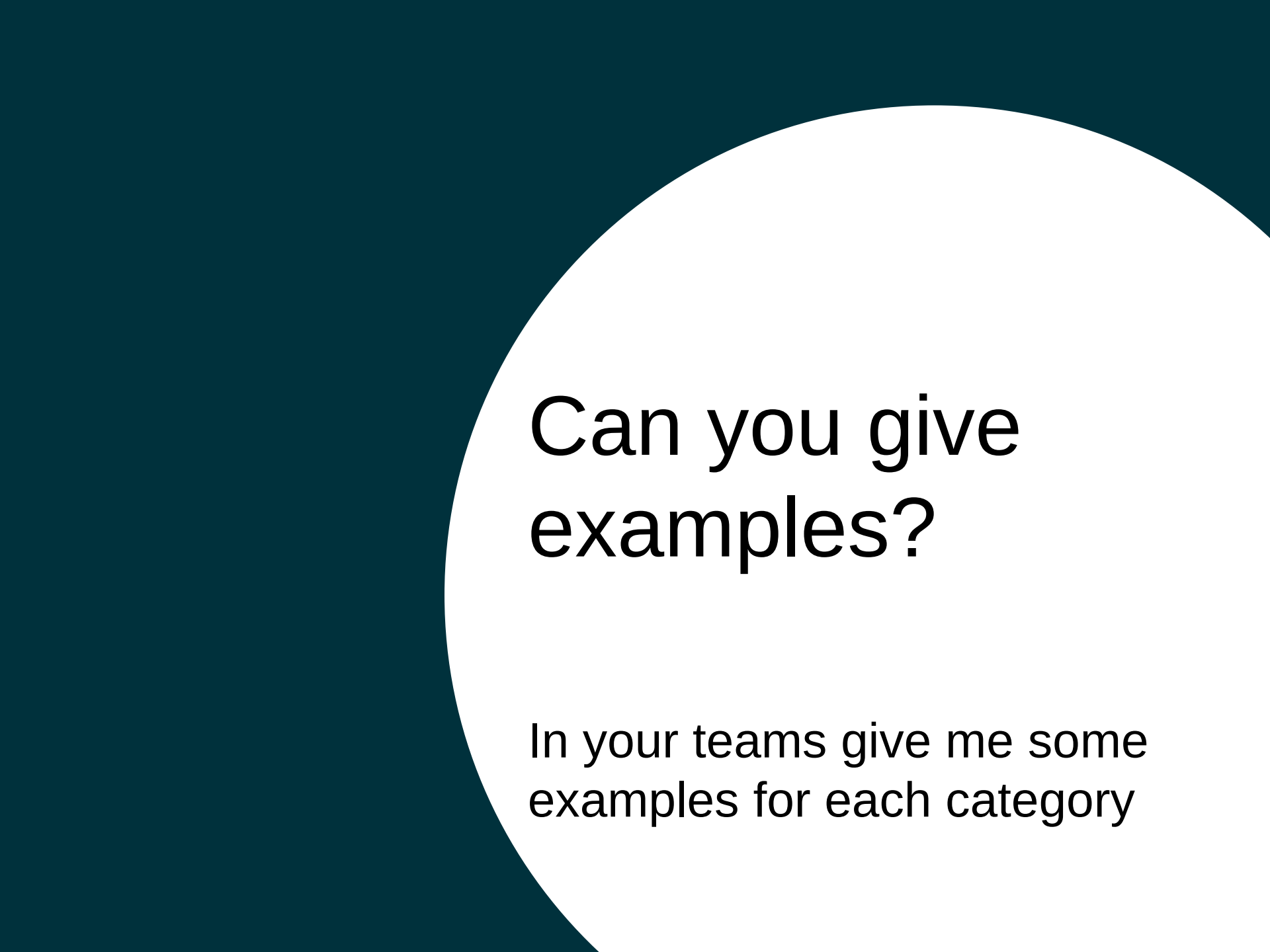
Styles of communication

How do we communicate?



How **do** we communicate?

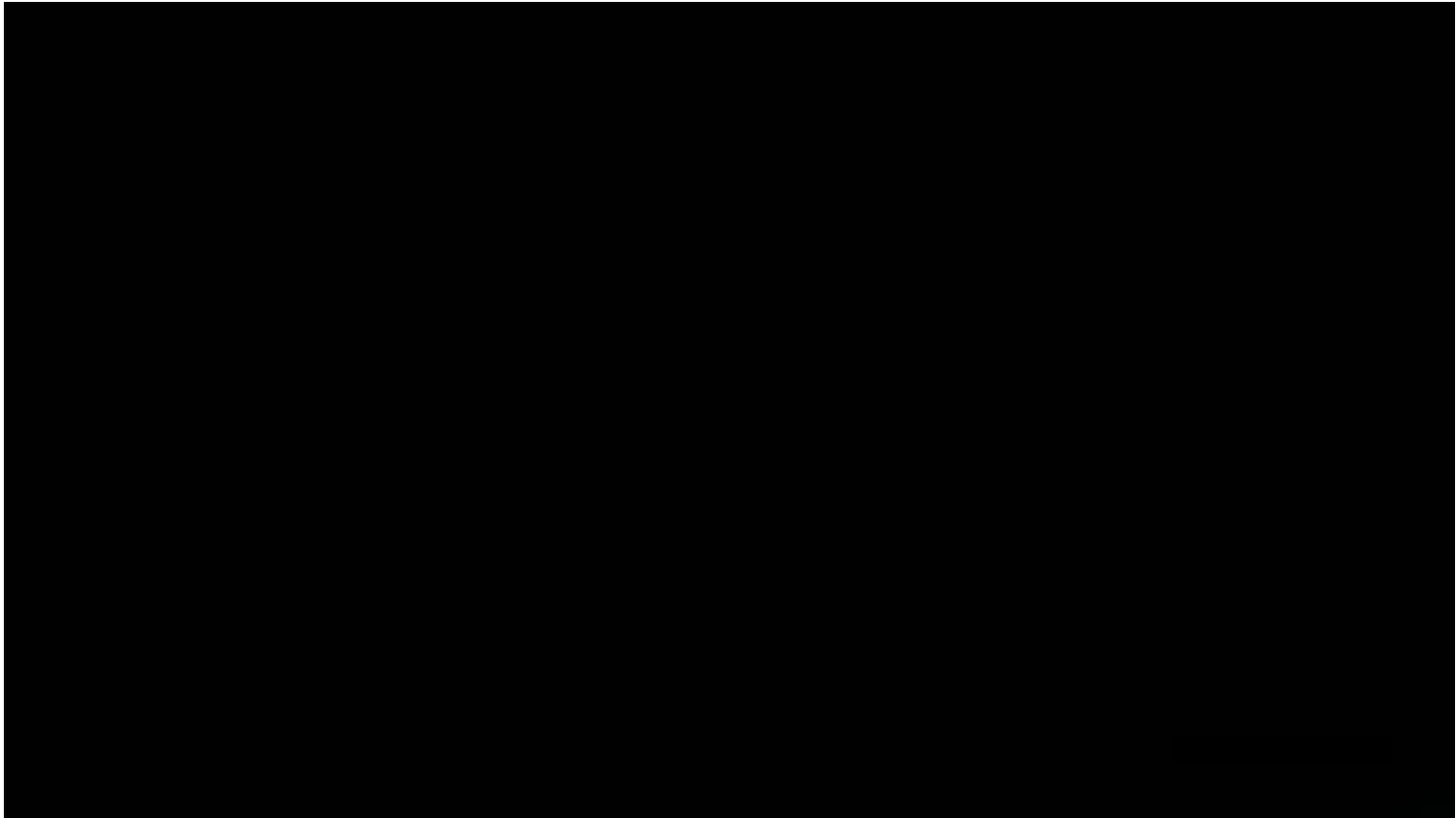
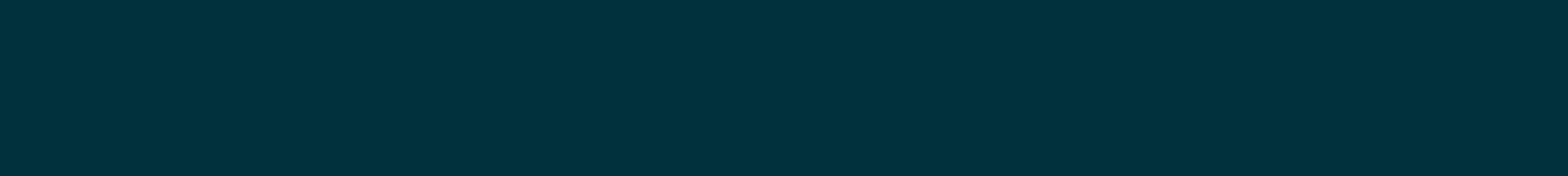




Can you give examples?

In your teams give me some
examples for each category

- Via various means:
 - - Verbal e.g. voice, words, tone
 - - Non verbal e.g. Body Language, Dress etc
- Communication channels
 - Signage
 - Directions
 - Departure / Arrival Screens
 - Media e.g. Steps, Posters etc



Steps in communication process

5 key steps



- Understanding the steps of the communication process is essential to becoming a better communicator
- Once you understand the basic steps in the process, you can make a conscious effort to communicate more effectively
- While there are differing opinions as to how many steps there are in the communication process, a basic five-step communication process is the most useful and easiest to understand

5 Steps



What do you think each element involves?



- **The Idea:**
 - The very first step in the creation process is the creation of the message or idea that you want to convey to your audience
 - Communication can occur on a number of different levels and in a variety of different formats
 - Therefore, it is necessary to choose how the idea you are going to convey will need to be communicated and to whom it will be communicated as well
 - The idea or message must be appropriate for the type of audience and the size of the audience.

Conveying the Message:

- Once the idea has been created and the audience has been selected, then you must take the next step in the communication process, which is to actually convey the message
- The message can be conveyed in a number of different ways: verbally, in written form or through more subtle means such as hands-on training
- It is essential to choose the proper medium through which to transmit the message.
- You wouldn't want to deliver a romantic message to your significant other through a text message or email
- Selecting the right medium can affect how the message is received

Message Reception:

- Once the message has been transmitted to the chosen recipient and via the chosen medium, the recipient then receives the message
- The reception of the message is important in the communication process because the recipient ultimately determines if part or all of the message is received
- Some people have selective hearing and may only hear part of what is said
- Others may hear or read and remember every word
- The extent to which the message is received plays an important role in the next part of the communication process.

Interpretation:

- The interpretation of the message follows its reception
- Once the message is received, the recipient then determines what it means to him
- If he has only heard part of the message or has a limited capacity for understanding the message, he may interpret it differently than it was intended
- Even if the message is heard in its entirety, it can be misconstrued.

Response and Feedback:

- The recipient of the original message interprets the information and then formulates an appropriate response to the original message
- The response depends largely upon the extent to which the original message was heard or seen and whether or not it was properly interpreted
- The type of response ultimately depends upon how the recipient interprets the original information and the type of response or information that the original person requests
- This is where feedback is also important

- If the message is not heard or interpreted correctly, it is necessary for the original sender of the message to provide additional feedback to the person receiving the message
- This can only be done once the original message has been interpreted
- The original sender of the message must determine whether the recipient properly interpreted the message and provide additional feedback to ensure proper interpretation.

Project Management



What are Resources?

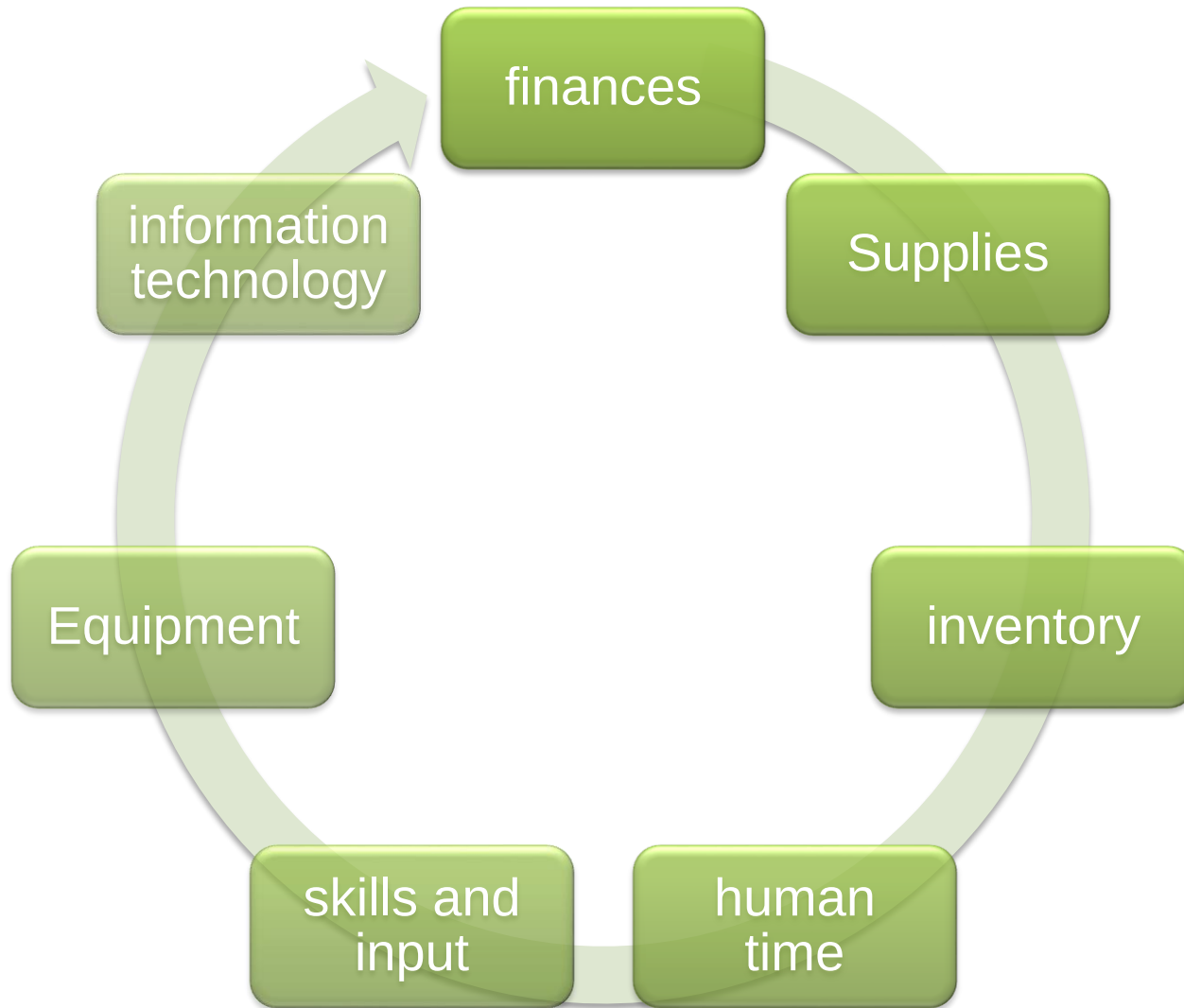


- **Resources** are commonly thought of as sources of supply or support, such as money, people, materials, technology, and space.
- For information system projects, more specific resources may include system developers, project managers, system analysts, stakeholders, development environments and information.



**What is project
resource
management?**

- As the name suggests, project resource management is the:
- arrangement and deployment of resources available to a project.



Why Is Effective Resource Management Important?



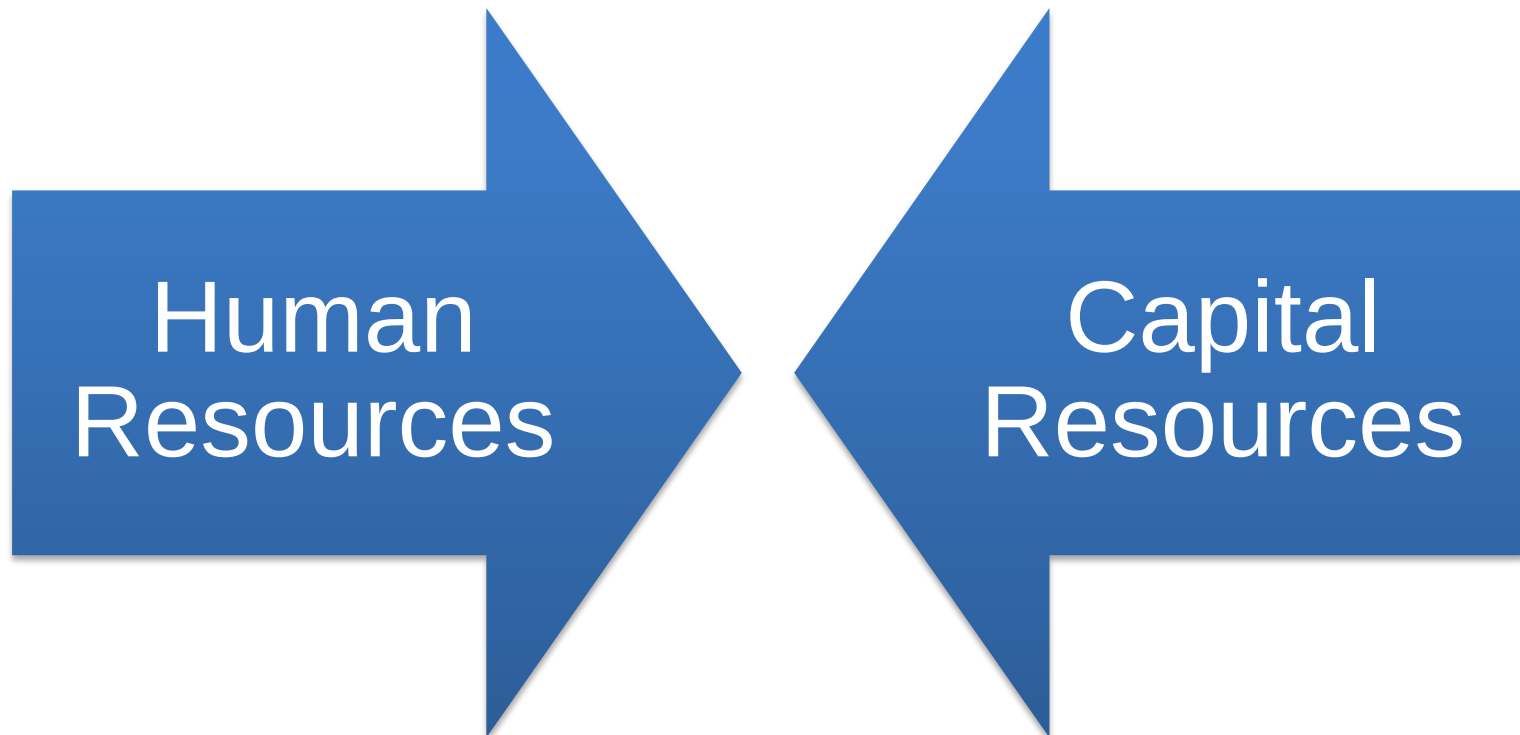
- One of the most important and most challenging jobs of a Project Manager is to effectually and efficiently organize all the resources involved in a project.
- It goes without saying that the complexity of this task will depend heavily on the scope and nature of the project at hand.
- But in all cases, it is *a critical factor behind success or failure*.

- At any given time, a Project Manager must know how to effectively juggle numerous project resources.
- The manager must know how to create and stick to a budget so that funds are allocated where they are needed and effectively organize workers and project personnel so that the right people are assigned appropriate tasks.
- In addition, it is necessary to have an effective deployment and flow of services, supplies and inventory so that the project has access to what it needs, when and where it needs it and at the most appropriate price.

- Effective and fluid communications with support services is vital for project success.
- It is often stated that “project management is too important to leave to the project staff alone”.
- Support staff members have critical skills and experience.
- They need to be engaged in the project as early as possible.
- Failure to involve them will usually result in inaccurate and/or incomplete planning and, as a result, poor implementation and delivery.

Types of Resources

There are two primary types of resources used in information system projects namely:



Human Resources

- is personnel pool available to an organization.
- The most important resources in any organization it's human resources.
- Appropriate human resources assure an organization that the right number and kind of people are available at the right time and place so that organizational needs can be met.

Human Resources

- **Human Resources** include all project stakeholders, such as customers, project team members, support staff, project suppliers and end users.
- In Information Technology, human resources consist of :
 - System Analysts
 - System Developers
 - System Programmers..etc.

Human Resource Management

- **Human Resource Management:** is the strategic function performed in an organization that facilitates the most effective use of people(employees) to achieve organizational and individual goals.
- The person that manages Human resources is called **Human Resource Manager** or **Personnel Manager**.

Role of a Human Resource Manager.

The role of a HRM is:

- Acquiring Human Resources
- Maintaining Human Resources.

```
graph LR; A[Acquiring Human Resources] --- B[Human resources planning<br/>•Recruitment<br/>•Selection and Screening<br/>•Orientation.]; M[Maintaining Human Resources] --- C[•Training and Development<br/>•Performance Appraisal<br/>•Rewards and recognition<br/>•Retention and Replacement.];
```

- Training and Development
- Performance Appraisal
- Rewards and recognition
- Retention and Replacement.

- Human resources planning
- Recruitment
- Selection and Screening
- Orientation.

Capital Resources

- Capital Resources can be defined as the tools and infrastructure used to produce other goods and services.
- While the range of assets that can be considered to be a capital resource is very broad, it is important to note that not all assets are capital resources.
- There are a few basic qualifications that govern what assets can properly be referred to as a capital resource.

- One of the basic criteria for an asset to be considered a capital resource relates to the long-term use of the asset in the production of goods and services.
- In general a capital resource will be anticipated to aid in the creation of products for an extended period of time.

Capital Resources (cont.)

- The management of capital resources is particularly important when considering opportunity costs.
- **Opportunity costs** are a measure of the alternative opportunities forgone in the choice of one good or activity over others.

Managing Resources

- Efficient and effective use of resources can often make or break a project.
- Because resources are limited some hard to be obtain ,expensive or both.
- The allocation of resources can have a major influence on project schedules.
- For ex: limited programmers effects time, cost , quality , risk management.

Implications of Failure

- To correct a delay error, project manager can assign additional resources to the task to get back on schedule – this is known as crashing, but even this helps cost too much sometimes.
- When planning a project , managers first decide on the deliverables of the project and the activities needed to produce them.

Implications of Failure(cont.)

- The next step is to estimate resources needed.
- Combination of resource needs and availability helps to determine the time needed for entire project.
- It should be considered during the initiation, planning, execution, and close-out phases of a project.