

第11回 国際PPPフォーラム
11th International PPP Forum

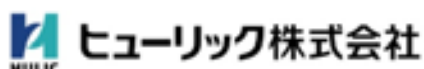
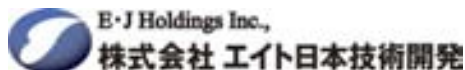
インフラとPPP

How can PPP resolve long-term infrastructure investment challenges?

主催 **東洋大学**
後援 内閣府、総務省、国土交通省
2016年10月25日 於大手町サンケイプラザ

Hosted by
TOYO UNIVERSITY
Supported by
Cabinet Office
Ministry of Internal Affairs and Communication
Ministry of Land, Infrastructure, Transport and Tourism
Otemachi Sankei Plaza October 25, 2016

特別後援



- 1330 主催者あいさつ
福川伸次氏(東洋大学理事長)
- 1335 基調講演1「フランスにおけるPPPの経験」
サリム・ベンスメール氏(フランス財務省FIN INFRA局長)
財務省Fin Infra(インフラファイナンス支援組織)局長。金融機関やパリ市の財務副局長(インフラ、PPP担当)、経済開発局長等を歴任。水、下水道、道路、高速鉄道等幅広いインフラプロジェクトの経験を持つ。
- 1400 基調講演2「イギリスのPPP:進化と教訓」
ハビエル・エンシーナス氏(イギリス財務省・内閣府IPA国際部長)
IPA国際部長。IPAの有償アドバイザー業務を担当。これまで世界30カ国以上の政府、PPPユニット等に対してPPP制度、計画・企画、財務計画などについてアドバイスしている。銀行でのプロジェクトファイナンス、融資などの経験を持つ。
- 1425 ビデオ「運輸省ビルドアメリカ局の発足と活動」
ジョディ・ミシアク氏(米運輸省ビルドアメリカ局シニアアドバイザー)
補足説明:サム田淵氏(東洋大学大学院教授)
- 1450 休憩
- 1500 講演「PPPとインフラに関する日本政府の組織」
根本祐二氏(東洋大学教授)
- 1515 パネルディスカッション
モデレーター:サム田淵氏
パネリスト:ベンスメール氏、エンシーナス氏、根本祐二氏、
美原融氏(東洋大学大学院客員教授、美原融事務所代表)
- 1630 閉会



11th International PPP Forum--Program

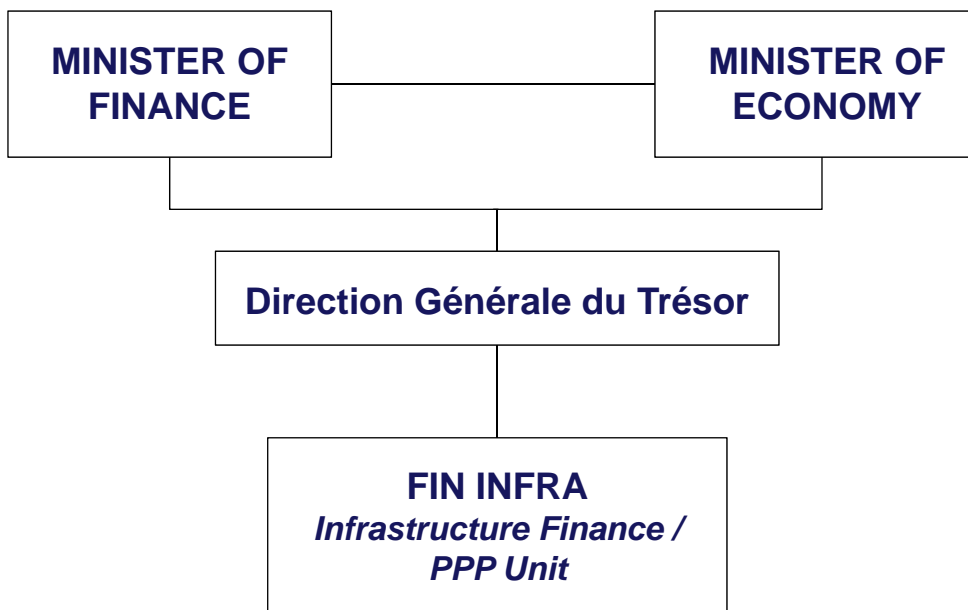
- 1330 Opening remarks
Shinji Fukukawa, Chairman, Toyo University
- 1335 Keynote Speech “The French PPP experience”
Salim Bensmail, Managing Director, Mission d’Appui au Financement des Infrastructures
Managing Director of Infrastructure Finance Unit at the French Treasury Department (Fin Infra) and advises French public sector entities on the structuring of infrastructure projects. He previously held various positions in the financial services industry and at the City of Paris, including Deputy-Director for Financial Affairs in charge of Infrastructure & PPPs and Director for Economic Development. He has wide range of experience in infrastructure projects.
- 1400 Keynote Speech “The UK PPP programme: evolution and lessons learned”
Javier Encinas, Project Director, Infrastructure Projects Authority
Project Director of the International Unit of the Infrastructure and Projects Authority. He co-manages IPA’s international fee earning advisory and capacity building activities. He has worked with over 30 governments around the world providing strategic advisory, technical and training support for the development and implementation of PPP units and policy, and for the planning, delivery and financing of infrastructure programmes and projects.
- 1425 Video “Introduction of Build America Bureau and its activities”
Jodie Misiak, Senior Advisor, Build America Bureau
Supplementary explanation: Sam Tabuchi, Professor, Toyo University
- 1450 Break
- 1500 Speech “The Organizations on PPP and Social Infrastructure of the Japanese Government”
Yuji Nemoto, Professor, Toyo University
- 1515 Panel Discussion
Moderator: Prof. Tabuchi
Panelists: Mr. Bensmail, Mr. Encinas, Prof. Nemoto and Prof. Toru Mihara



11th International PPP Forum – Toyo University
Tokyo - 25 October 2016



The French Infrastructure Finance Unit : FIN INFRA – Mission d'appui au financement des infrastructures



FIN INFRA : Who we are

► From a PPP Unit ... to an Infrastructure Finance Unit

- ◆ *Replaced MAPPP in April 2016*
- ◆ *“Service à compétence nationale” reporting to DG of the Treasury*
- ◆ *Strengthened financial, legal and technical skills*

► Mission statement

- ◆ *Facilitate the financing of public infrastructure projects*
- ◆ *Maximize the value for money of projects*
- ◆ *Identify and mitigate the risks of projects*

► What we do

- ◆ *Advise government and public sector entities on the structuring of projects, negotiation of concession and PPP contracts, infrastructure finance more broadly*
- ◆ *Ex ante control of recourse to PPP by State and local government*
- ◆ *Not a procuring authority !*

From concessions to PPPs

► Long history of private sector involvement in provision of infrastructure through concessions

- ◆ *Concession “invented” by François 1er in the XVIth century (Le Havre Port)*
- ◆ *XIXth and first half of the XXth centuries : rail tracks, electricity networks, water canals, telephone equipment delivered through concession contracts*

► Availability based PPP legislation « only » introduced in 2004

► Now a wide range of infrastructure delivery models

- ◆ *Traditional in-house delivery, PPPs and concessions*
- ◆ *Institutional PPPs : public-private enterprises (société d'économie mixte)*
- ◆ *Private ownership + regulation*

► Supported by a strong institutional environment

- ◆ *Stable and secure legal framework, including Conseil d'Etat jurisprudence*
- ◆ *Extensive technical skills across public sector authorities*
- ◆ *France ranked #8 / 140 for infrastructure on WEF Global Competitiveness Index*

Among the most active PPP markets in Europe

- ▶ **Major greenfield transportation PPPs and concessions**
 - ◆ *High Speed Rail Nimes –Montpellier bypass (€ 1,5 Bn) PPP*
 - ◆ *HSR Bretagne Pays de Loire PPP (€ 2,8 Bn)*
 - ◆ *HSR Tours – Bordeaux concession (€ 7,8 Bn)*
 - ◆ *Highway concessions : most recently Strasbourg Western Bypass (A355) ; Lyon – Saint Etienne (A45) ...*

- ▶ **National PPP programmes for social infrastructure**
 - ◆ *Universities : 27 PPPs for Plan Campus*
 - ◆ *Defense and Justice : Prisons, court-houses (TGI Paris) ; Balard*
 - ◆ *Health Care : PPPs part of « Hôpital 2000 » plan*

- ▶ **Extensive recourse to concessions and PPPs by local authorities**
 - ◆ *Local transportation, parking facilities*
 - ◆ *Water, waste, urban heating*
 - ◆ *Public buildings, stadiums, sporting facilities ...*

Major overhaul of public procurement law in 2015-16

	DESIGN	BUILD	MAINTAIN	OPERATE	FINANCE
Traditional public procurement					
"Conception - Réalisation"					
Marché global de performance					
Marché de partenariat					
PPP "light"					
PPP standard					
Concessions	With traffic risk				

PPP reform : limiting vs. refocusing PPPs

- ▶ A challenging policy and political environment for reform

The 2015 / 20216 reform aims to refocus PPPs on projects for which their value added is greatest :

- ▶ **Stronger safeguards**

- ◆ *Marché de partenariat : creating a single form of PPPs*
- ◆ *Minimum financial threshold set by law*
- ◆ *Strengthened preliminary assessment on value for money and fiscal sustainability*

- ▶ **Increased flexibility**

- ◆ *More sensible, pragmatic legal conditions to using PPPs*
- ◆ *Opening up flexible alternatives to PPPs*

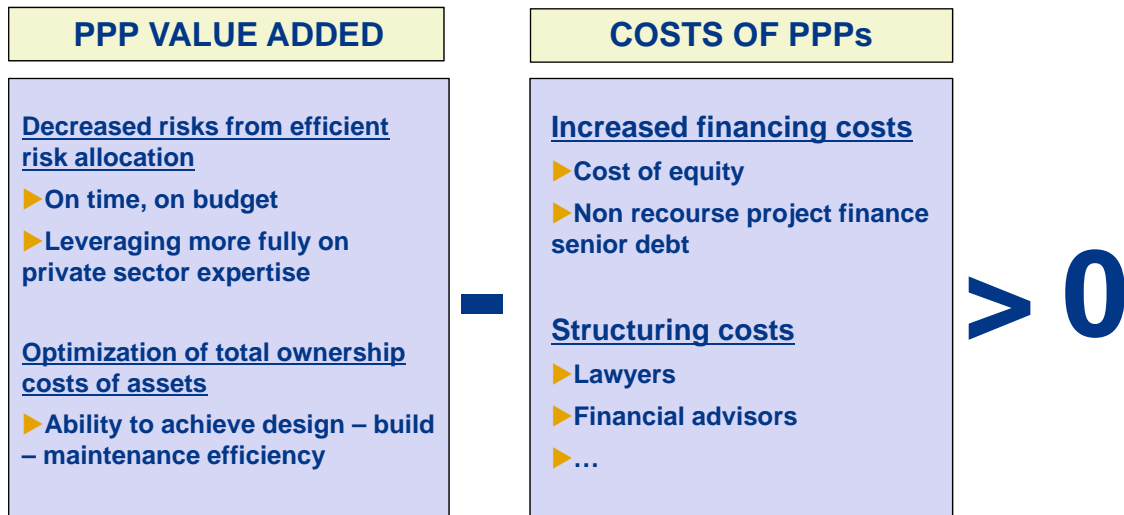
What are PPPs ?

- ▶ **Global and long term (contractual) approach to the procurement of infrastructure assets and services**
 - ◆ *Design, Build, Maintain, ... Operate*
 - ◆ *Focus on the long term total cost of infrastructure*
- ▶ **Based on private financing of a significant share of CAPEX costs**
- ▶ **2 remuneration mechanisms and risk profiles**
 - ◆ *Availability payments => “PPP” => Construction, performance & availability risk*
 - ◆ *User fees => Concession => construction, performance, and traffic risk*
 - ◆ *Can be combined ...*
- ▶ **Contractual PPPs vs Institutional PPPs**
 - ◆ *Usually combined with a contractual relationship with the public authority*

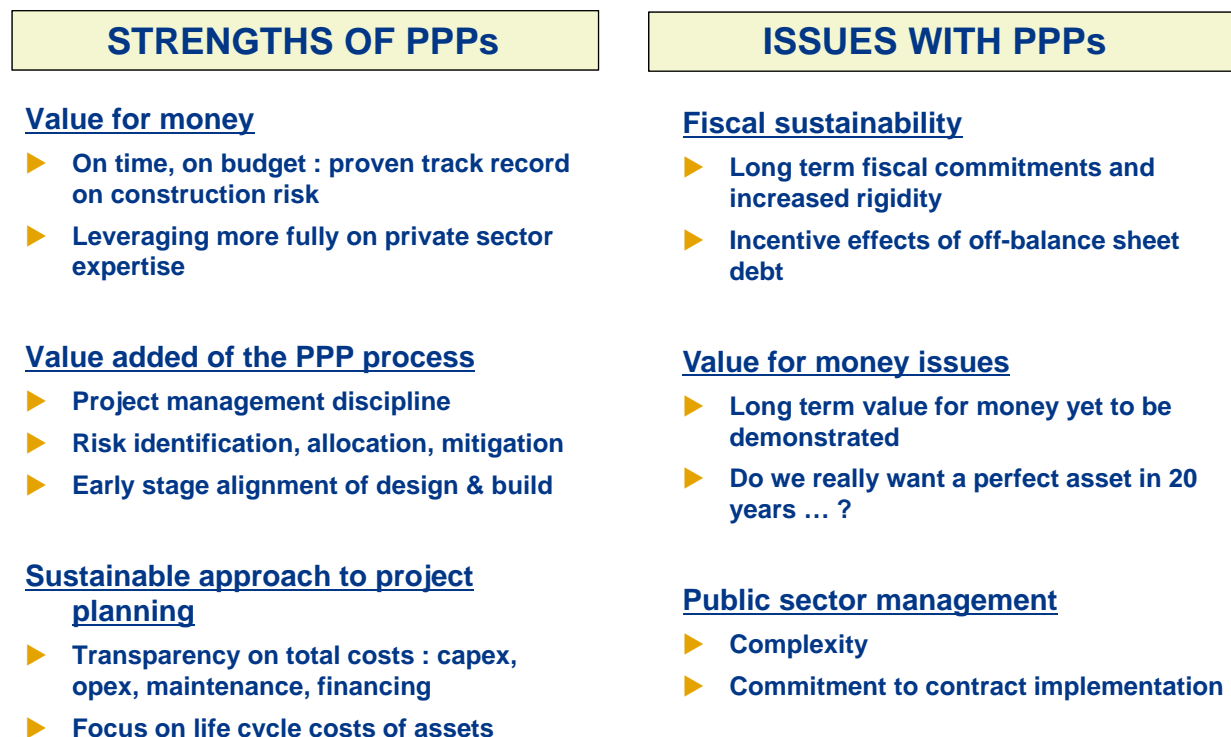
Long term agreement between public and private sector for the provision and financing of infrastructure assets and services

The simple – theoretical - economics of PPPs

VALUE FOR MONEY



An objective assessment of PPPs



Our approach to choosing a procurement option (1)

- ▶ *PPPs are a specific model for allocating responsibilities in the design and delivery of a project*
 - ◆ *Public authorities define their needs, objectives but let the private partner define the solution and how to implement it*
 - ◆ *Refocusing on performance*

- ▶ *PPPs should be based on a clear contractual allocation of risks to the party best positioned to mitigate them*

- ▶ *PPPs should NOT be seen as a financing mechanism for projects*

- ▶ *Financing mechanisms should be construed as a tool to support the efficiency of risk allocation*
 - ◆ *Importance of third party investors*

Our approach to choosing a procurement option (2)

1. *Who are you ?*
2. *What can you do ?*
3. *What do you want to do ?*
4. *What are your main objectives / criteria ?*
5. *What are the procurement options ?*
6. *Can the market deliver these options ?*
7. *Which option best meets your objectives ?*
8. *Can this option be cost effective ?*

*Does this project
make sense ?*

*Is this project
affordable ?*

Our infrastructure investment policy

INFRASTRUCTURE POLICY

- ✓ **Building a clear infrastructure strategy**
 - *Robust project pipeline*
 - *Comprehensive policy on private capital involvement*
- ✓ **An efficient policy environment**
 - *Clear and flexible legal framework*
 - *Streamlined procurement process*
 - *Efficient and standardized contract policy*
- ✓ **Bringing well structured projects to market**
 - *Value for money for government*
 - *Sustainable risk / return profile*
 - *Critical size*



The UK PPP programme : evolution and lessons learned

Javier Encinas, Project Director
Infrastructure and Projects Authority



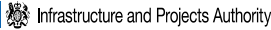
October 2016
Tokyo, Japan

Agenda

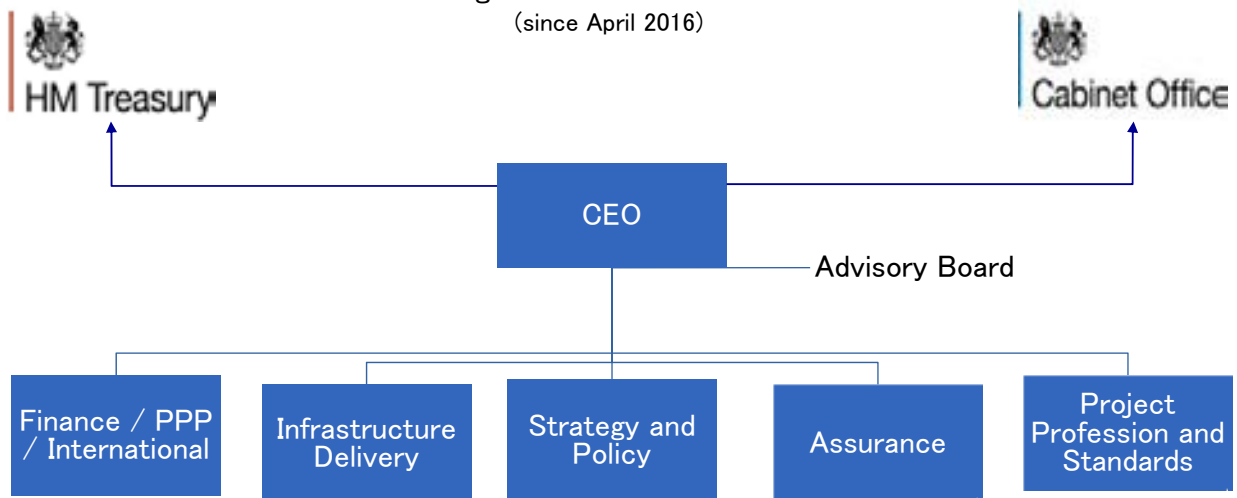
- Evolution of the UK's PPP Institutional Framework
 - From PUK to IUK to IPA
- Evolution of the UK's PPP programme
 - From PFI to PF2
- Roles of the UK Government
 - As an architect, planner, critical friend and partner
- Lessons learned

Institutional Framework

Evolution of the UK's PPP Institutional Framework

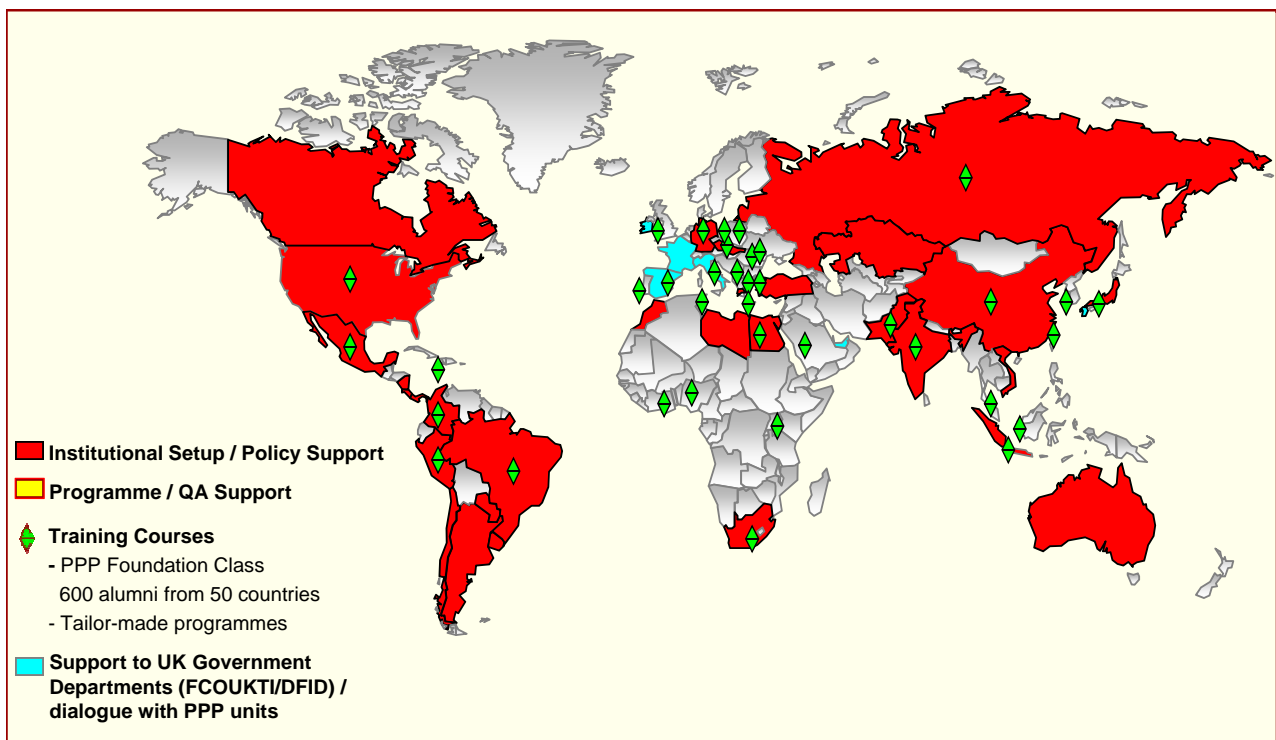
	2000-2010 	2010 – 2016 	2016 - ? 
Differences	PUK	IUK	IPA
Structure	JV 51% priv / 49% pub	100% HMT owned unit	JV 50% HMT / 50% CO
Location	outside Gov.	HMT	HMT
Operating model	charging model	free at the point of use	free at the point of use
Scope	PPPs	Infrastructure	Infra and Major Projects
Role	Delivery	Policy, Planning, Delivery, & Financing	Policy, Planning, Delivery, Finance & Assurance
Similarities	PUK	IUK	IPA
Mission	Public	Public	Public
Staff	Public-Private	Public-Private	Public-Private
Employees	70	80+	160
Skills	100% commercial	70% comm. - 30% policy	60 comm. / 40% policy
Contractual terms	Sim. To Private Sector	Comm. Specialist Grade	Comm. Specialist Grade

Organisational Structure
(since April 2016)



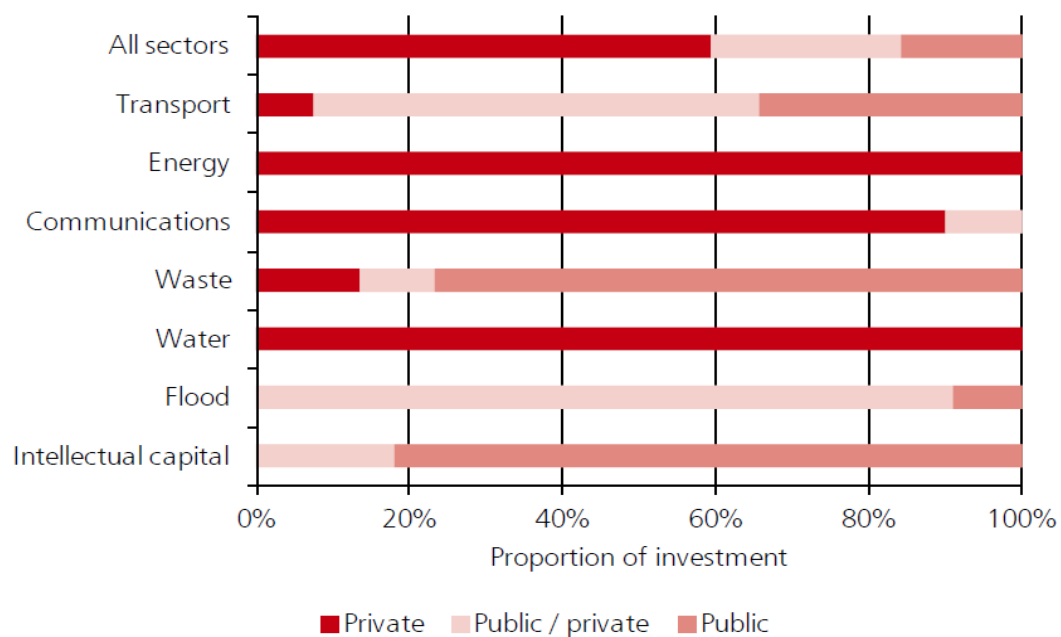
- This is a mature structure that deals with all infrastructure and major projects in the UK.
- IPA was created in January 2016 following the merger of HM Treasury’s Infrastructure UK (IUK) and the Cabinet Office’s Major Projects Authority (MPA).

IPA’s International Activities

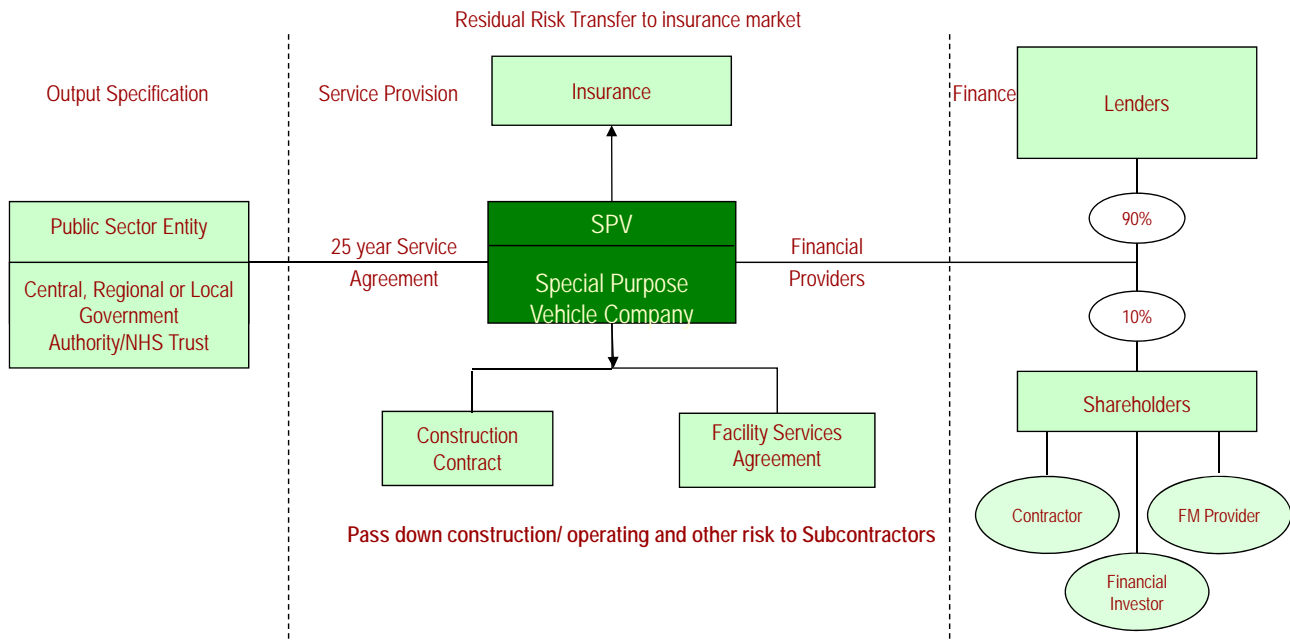


The UK Experience

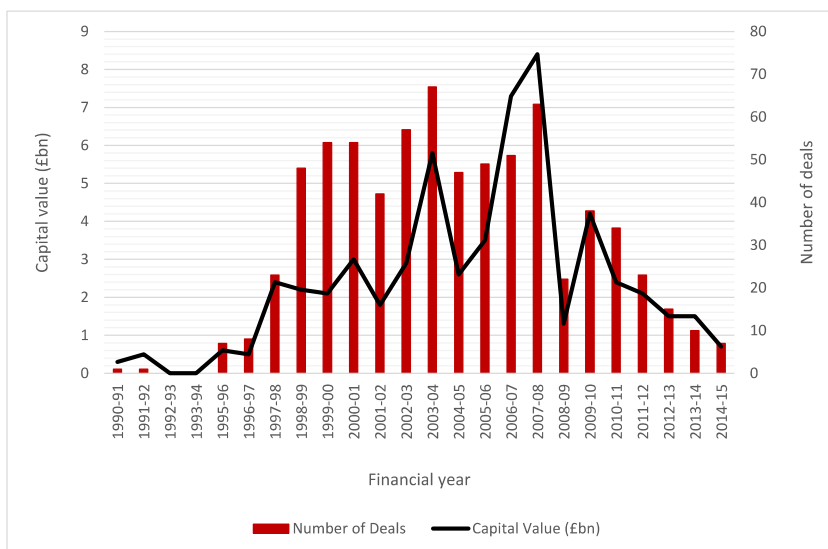
Most UK infrastructure investment has been financed by the private sector:



Overview: Typical PFI Structure



PFI Signed Deals and Capital Value by Financial Year



Total Capital Value:
£57.7 Billion

No. of Signed
PFI / PF2 Projects:
722

No. of operational
PFI Projects: **679**

**This does not include PPP projects under the NHS LIFT Programme*

Source: Figures based on departmental and devolved administration returns. Current projects only – does not include projects that have expired or terminated

**Normally calculated at financial close of individual contract*

Common Sectors



Common Sectors (continued)



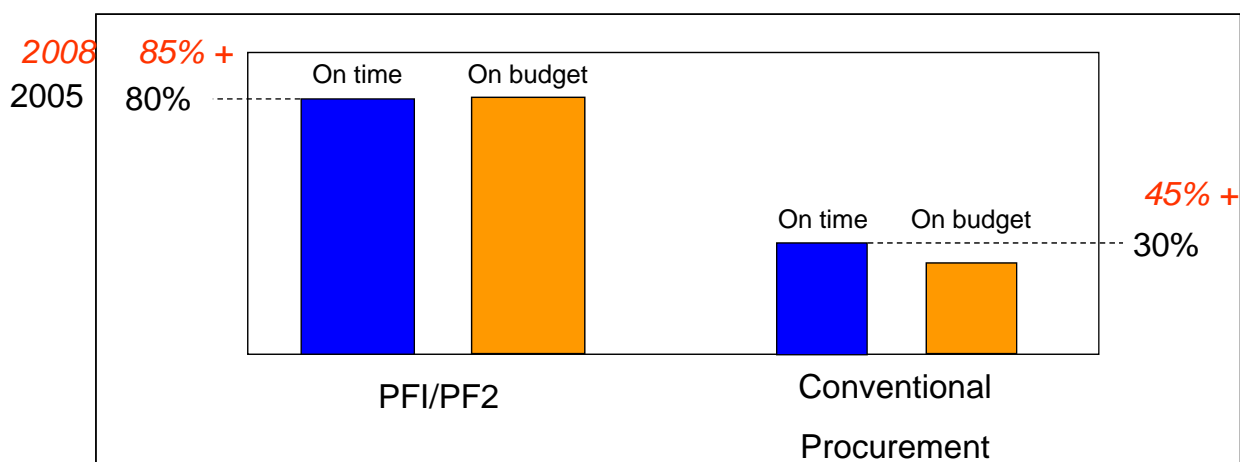
- Also
- Housing
 - Courts



So – Has it Worked?

Comparison with Conventional Procurement Evidence

Delivery on time and on budget



Performance of completed projects – No. of Projects

Source: National Audit Office – UK Parliament – Expenditure Auditor

PFI Operational Performance

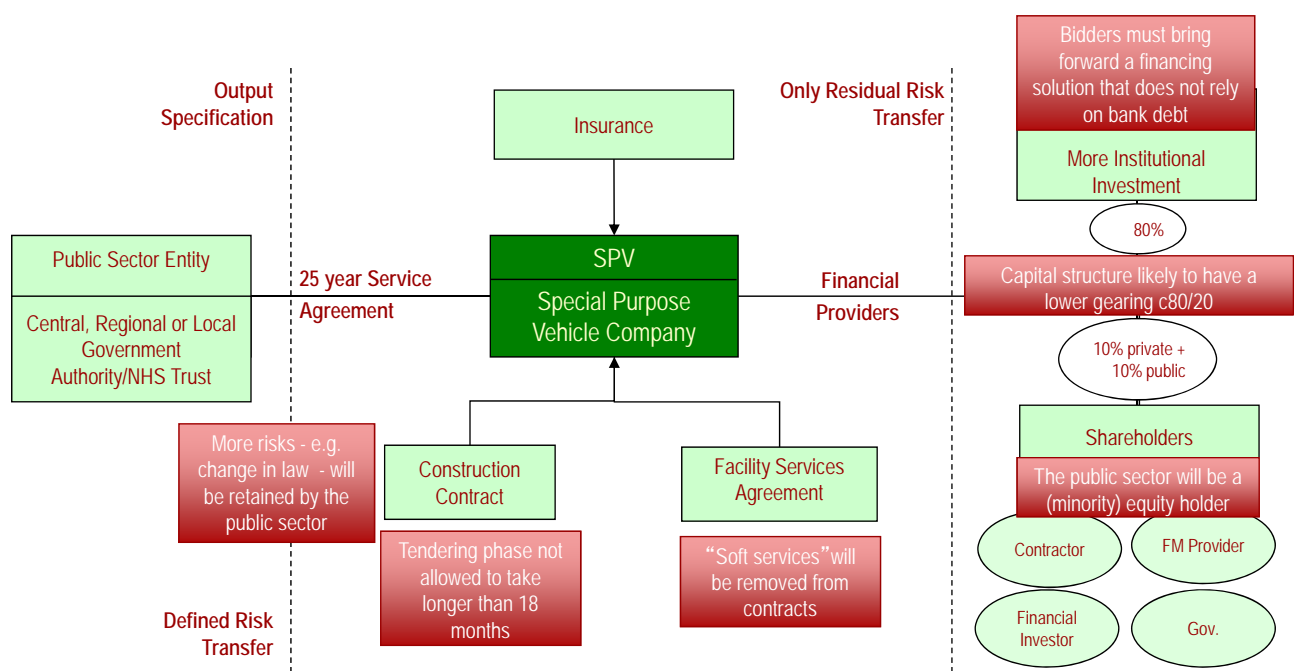
- ***users are satisfied*** with the services provided by PFI projects;
 - ***PFI is delivering the services required*** with over 90% of public service managers believing that services provided are satisfactory or better;
 - ***the incentivisation within PFI contracts is working*** with the payment mechanism improving the service being provided in the PFI projects
 - evidence that PFI projects can lead to ***better educational outcomes***
- ***However the old model suffered criticisms, especially in the face of challenging economic realities where long term finance is harder to come by, and had to evolve....***

The UK PF2 Model – Adapting to a Challenging Market

The new model adapts to the new economic realities and responds to the criticisms of old PFI

- Economics
 - The failure of the monolines - killed the PFI bond market
 - The drying up of long term bank finance (as banks re-capitalize themselves)
- Criticisms of the old model
 - Increasing cost of bank debt makes it uneconomic
 - PFI used by some public bodies and government departments as a device for off-balance sheet borrowing
 - Long term PFI service delivery is inflexible
 - Private sector is making too much profit from PFI – hidden returns
 - Projects take too long to procure
 - The public and private sectors need a closer partnership ethos

The core principles of the “traditional” PFI model remain the same under the new PF2 model



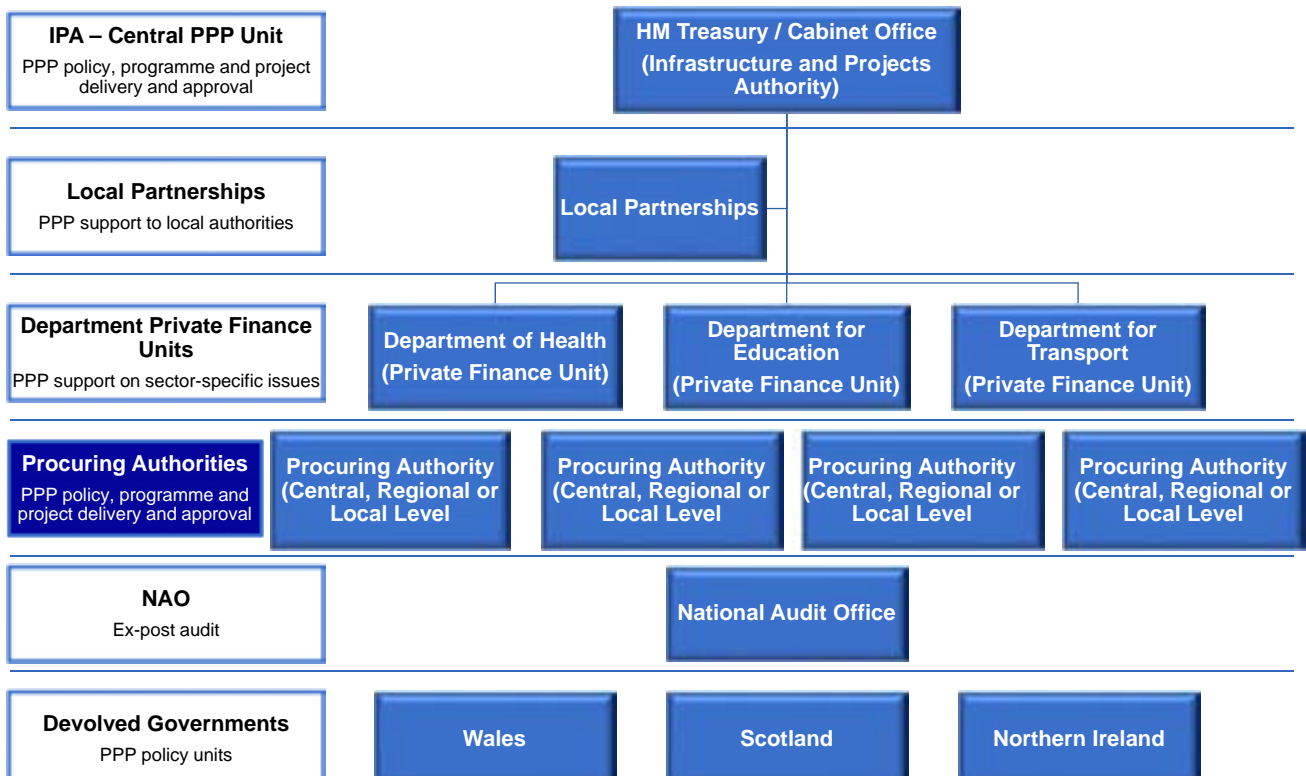
	PF2	PFI
Finance: Equity	<ul style="list-style-type: none"> The public sector will be a (minority) equity holder A proportion of equity will be competed for post preferred bidder 	<ul style="list-style-type: none"> In nearly all PFI projects the equity holders are from the private sector All equity allocated at the point of appointing the preferred bidder
Finance: Debt	<ul style="list-style-type: none"> Must bring forward a financing solution that does not rely on bank debt Capital structure likely to have a lower gearing c80/20 	<ul style="list-style-type: none"> Since 2008 virtually all debt has been raised from the banks A PFI accommodation project has a typically c90/10 structure
Procurement	<ul style="list-style-type: none"> Tendering phase of projects not allowed to take longer than 18 months (unless an exemption has been agreed) Additional pre-procurement checks before projects go to market 	<ul style="list-style-type: none"> No time limit on the tendering phase (worst projects took up to 60 months)
Services	<ul style="list-style-type: none"> 'Soft services' such as cleaning and catering removed from contracts Standardised output specifications introduced for accommodation projects 	<ul style="list-style-type: none"> 'Soft services' included in most PFI projects Output specifications generally designed on a project by project basis
Transparency	<ul style="list-style-type: none"> Spending control total to be introduced for PF2 projects Private sector equity return information to be published by Treasury A business case approval tracker to be introduced 	<ul style="list-style-type: none"> Assessment of PFI liabilities published since July 2011 in the form of WGA but no spending control of projects Private sector equity return information derived only from published annual accounts No published information on status of business cases
Risk allocation	<ul style="list-style-type: none"> Some risks retained by the public sector compared with PFI 	<ul style="list-style-type: none"> Risks such as change in law held by the private sector.

PF2 update

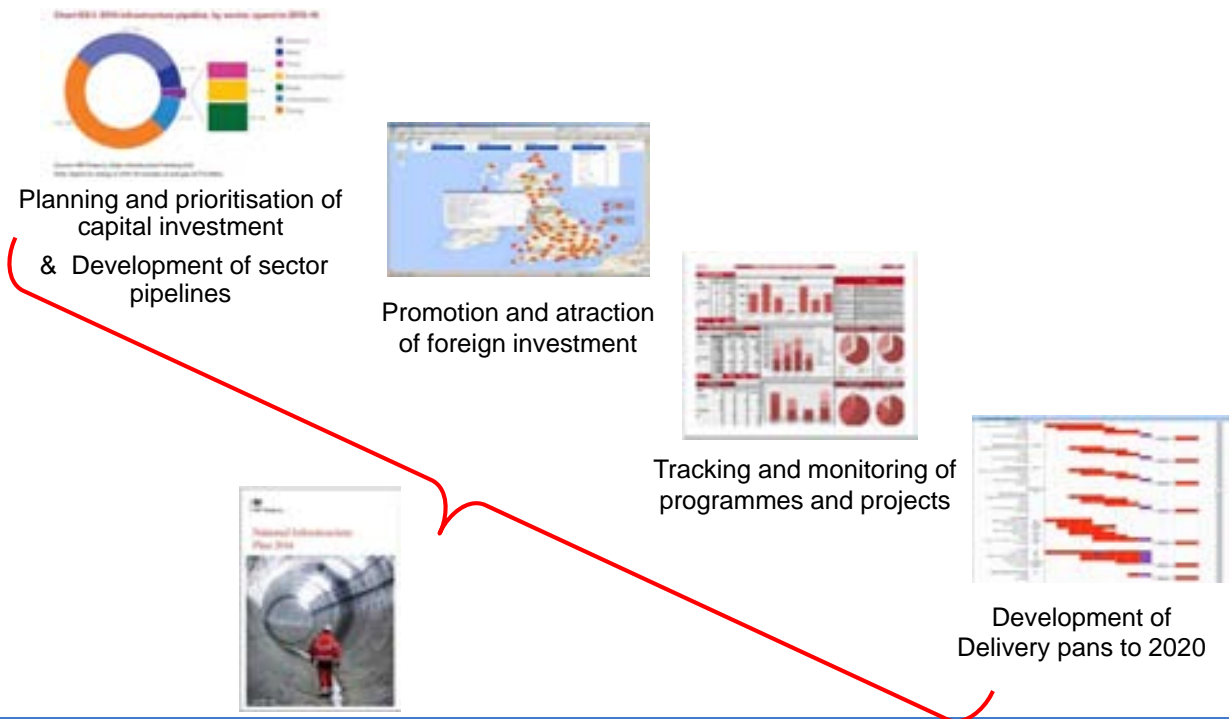
- PF2 Pipeline**
 - Five schools projects (delivering 46 schools) and a hospital (Midland Metropolitan Hospital in Sandwell, Birmingham), with a capital value of approximately £1bn, have reached financial close under PF2 so far.
 - The Infrastructure Projects Authority (IPA) is working with HM Treasury and other departments to identify a pipeline of public sector projects which could be delivered via PF2.
 - The Government is committed to using private sector innovation and skills in the delivery of public infrastructure. HMT will consider using private finance via PF2 where it shows value for money.
- Improving the legacy of PFI projects - Operational PPP Savings Programme**
 - In 2011, the Government launched a programme to deliver savings and efficiencies in operational PPP and PFI projects.
 - As of March last year, £2.1bn of savings and efficiencies had been reported, with an additional £2bn is still being explored through changes to the scope of contracts, more efficient utilisation of facilities and other testing of options within project delivery.

Roles of the UK Government

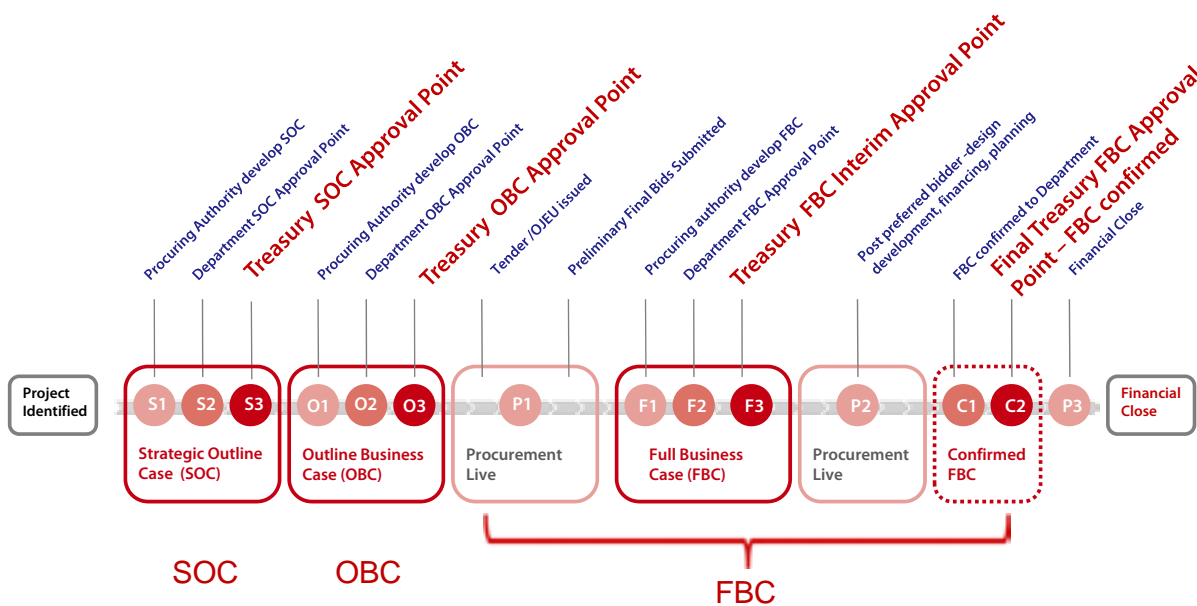
Architect: Designing the country's institutional framework



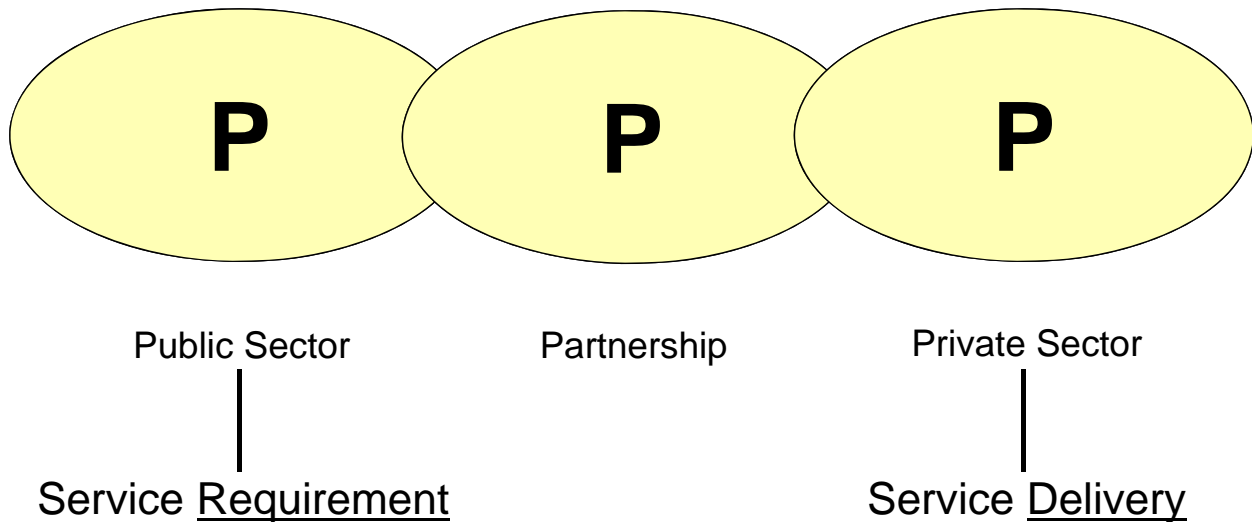
Planner: Planning, prioritising and delivering the country's long term investment in infrastructure programmes, projects and pipelines



Advisor and Critical Friend: accompanying the contracting authorities during the preparation, evaluation, approval, procurement and management of major infrastructure programmes and projects



Client and Partner: supporting and working alongside the private sector for the design, construction, financing, operation and maintenance public infrastructure



Lessons Learned from the UK's Experience in Delivering Infrastructure Projects with private participation

Lessons Learned from the UK Experience (1/2)

- **Social infrastructure has been at the heart of the UK's PPP (PFI/PF2) model**
- The PFI / PF2 model has allowed an **enormous increase in social (hospital, school, housing, office buildings), economic (transport) and environmental (waste management plants) infrastructure building.**
 - About 722 PFI and 47 PF2 projects signed worth £58.7 Billion (c US\$90 Billion), +90% in ops.
 - Difficult to imagine it could have been achieved in another way.
- The vast majority of projects have been completed **on-time and on-budget**, and have been properly maintained and operated
- More importantly, **users** (that is nurses, doctors, patients, teachers, students) **are very satisfied** with the quality of the infrastructure and the services provided.
- **PFI has also helped transform the design of hospitals, schools, prisons, public buildings** by allowing architects, builders operators and facility managers come up with innovative solutions that are functional, aesthetical, and cost-efficient to maintain and that can maximise the utilisation of the assets.

Lessons Learned from the UK Experience (2/2)

- **Government built sector specific capacity** by creating a **Central PPP / infrastructure unit** (PUK / IUK / IPA), **a local-level PPP unit (LP) and mini sector specific PPP units (PFUs)** within specific Departments (e.g. DoH, DfT) to support the development of PPPs in these sectors
- **...and adopted a programme approach to deliver capital investment in the health (but also in the education and housing) sector**, whereby various healthcare, schools, housing etc. projects were bundled in a programme, which was procured.
- **To reduce transaction costs standard procurement packs** with Project documentation, output specifications, KPI and payment mechanism & contract models **were produced.**
- Although the PPP model was developed to deal with a problem of financing, delivering and managing infrastructure, there is **some evidence that PPP can also help deliver better outcomes.**
- **PPP are not the Panacea but can be an extremely powerful tool to finance, deliver and manage infrastructure** that allow the public sector to provide better services to its citizens.
- Finally, the PPP model is today used in more than 30 countries in 5 continents. **Model has been tested, is flexible and can be adapted!**



Javier.Encinas@ipa.gov.uk



US Approach to Transportation Project and PPP Potential

11th International PPP Forum

October, 2016

Sam Tabuchi

Professor, PPP Graduate School

Toyo University

「荒廃するアメリカ」のインフラ



(Source: American Society of Civil Engineers, 2013)

アメリカのインフラ、公共施設の 老朽化対策・開発関連の施策

オバマ政権による近年の活動

- 2009年 米国復興・再投資法（American Recovery and Reinvestment Act）
- 2014年7月 ビルドアメリカ投資イニシアチブ
- 2015年 FAST法（アメリカ陸上交通修復法）

ビルドアメリカ投資イニシアチブの提言

- 投資センターの設立（遅れているPPPの普及を推進）
 - 運輸省 **Build America Transportation Investment Center (BATIC)**
 - 環境保護庁 Water Finance and Resiliency Center
 - 農業省 Rural Opportunity Investment Initiative
- 連邦・州・自治体・民間連携と
- インフラ開発に民間投資5兆円投資を目標
- 活用プロジェクト企画・計画能力の強化
 - Predevelopmentのためのガイドラインの公表
- 連邦政府の許認可プロセス改革
 - 「許認可ダッシュボード」の公表

ビルドアメリカ運輸投資センター（BATIC）

- アメリカ国内のPPPの大部分を占める運輸部門のPPP活用を加速させる
- 役割
 - PPPの情報提供（実施手続き、事例等）
 - 許認可等取得の技術支援
 - 資金補助制度、民間資金活用手法の情報提供
 - TIFIA、RRIF、Private Activity Bonds 等

→ BAB Video

アメリカ交通予算授権法の経過

- 1991 ISTEА 5年\$151billion(15兆円)
- 1996 TEA21
- 2005 SAFETEA-LU
- 2012 MAP-21
- 2014 Build America Initiative (BATIC設立)
- 2016 Set up Build America Bureau (BAB設立)
- 2016 GROW AMERICA ACT (議論中)

アメリカでは今後30年で7千万人人口増加
既存インフラ・公共施設再投資＋
新インフラ・公共施設投資が必要

事例紹介

テキサス州ヒューストン高速有料道路開発 財源

民間融資	300億円
TIFIA融資	360億円
TIFIA融資金利	15億円
テキサス病院基金	17億円
デベ+第3社投資	380億円

収入源

テキサス州運輸省支払い
高速道路料金+コンセッション

事例紹介

フロリダ州オーランドI-4・国所有道路の有料化 財源

民間融資	485億円
TIFIA融資 1	127億円
TIFIA融資 2	822億円
資本金投資	103億円
フロリダ運輸省支払い	1035億円
TIFIA融資金利	306億円

収入源

高速道路中2レーンの使用料（高速道路料金）

ビルドアメリカ投資イニシアチブの提言

運輸省 **BATIC - BAB** (運輸Pワンショップセンター)

- 他の連邦 (EPA, Agri, ENG省等) との連携
- 各州・自治体との連携
- 民間組織との連携 (PPP)
- インフラ開発に民間投資5兆円投資を目標
ゴールドマン、モーガン等数十社、欧州ファンド参加
日本から政策投資銀行、三菱UFJファイナンス等
電力・水・ガス・ジェネコン工事会社参加
ペンションファンド
- 活用プロジェクト企画・計画能力の強化
 - Predevelopmentのためのガイドラインの公表
- 連邦政府の許認可プロセス改革
 - 「許認可ダッシュボード」の公表

運輸プロジェクトでのPPP活用

公共資金だけでは資金不足—PPP必須

PPPは調達の手法で資金源ではない

PPPはより良い調達方法を提供、リスク移転、

効率性確保、VFM確率、より良い経営能力、

民はデザインからトランスファーまで可能

OM効率、LCC可能、資金投資、市場ノウハウ

ファイナンスも可能

PPPは全てのプロジェクトで使用できるわけではない

連邦、州政府、MPOで協議、決定

DB, DBOM, DBFOMT等の選択

開発前研究、リスク評価、民との対話

プロジェクトのフレキシビリティを民に委ねる

運輸以外のプロジェクト

インフラ・公共施設更新/新開発

PPP導入一民間参加で新しいアメリカの手法開発

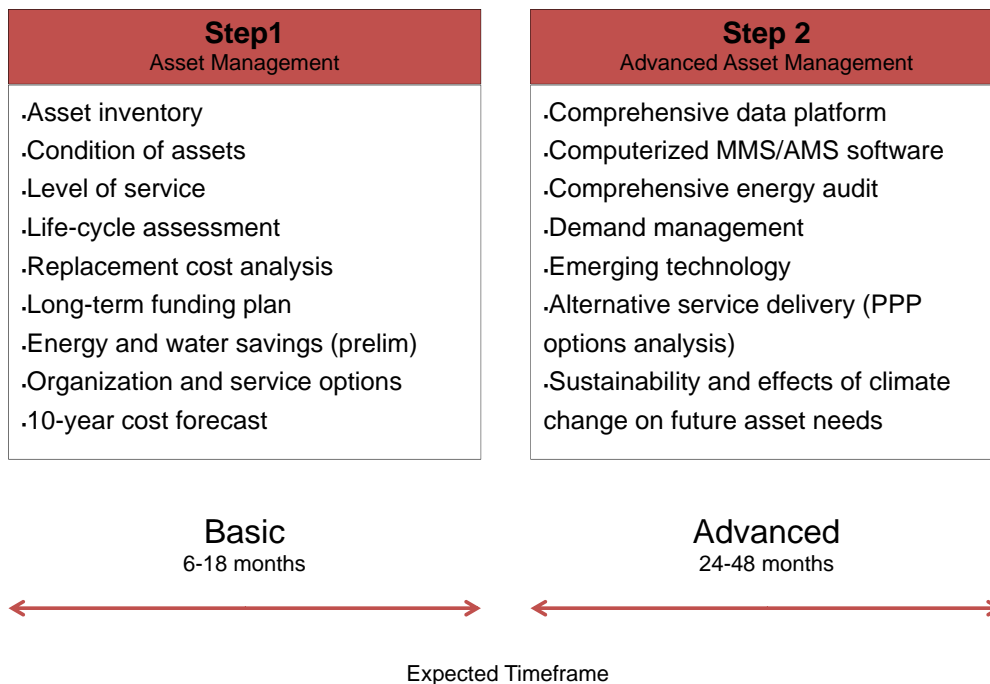
CFMP – Comprehensive Facility Management
Program

日本では施設等総合管理計画

簡単なCFMP説明

CFMP 一般的施設等管理の手法

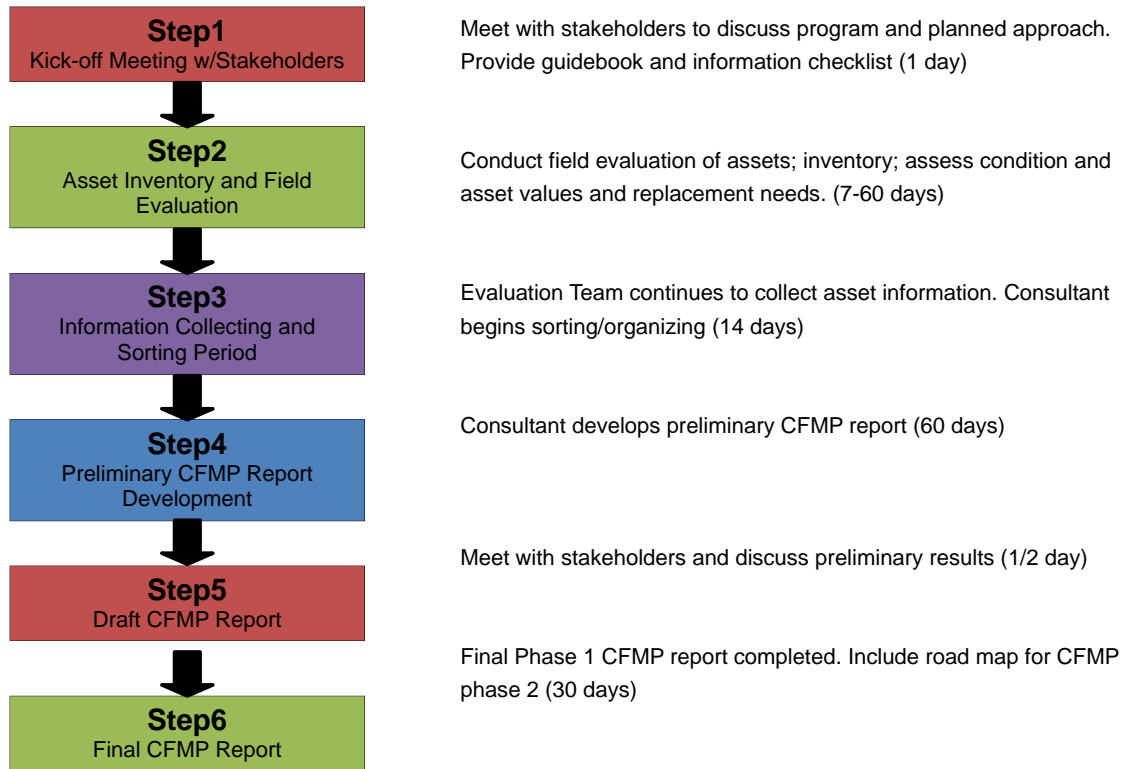
Two-Step Process



CFMP for U.S. Cities and Government Facilities

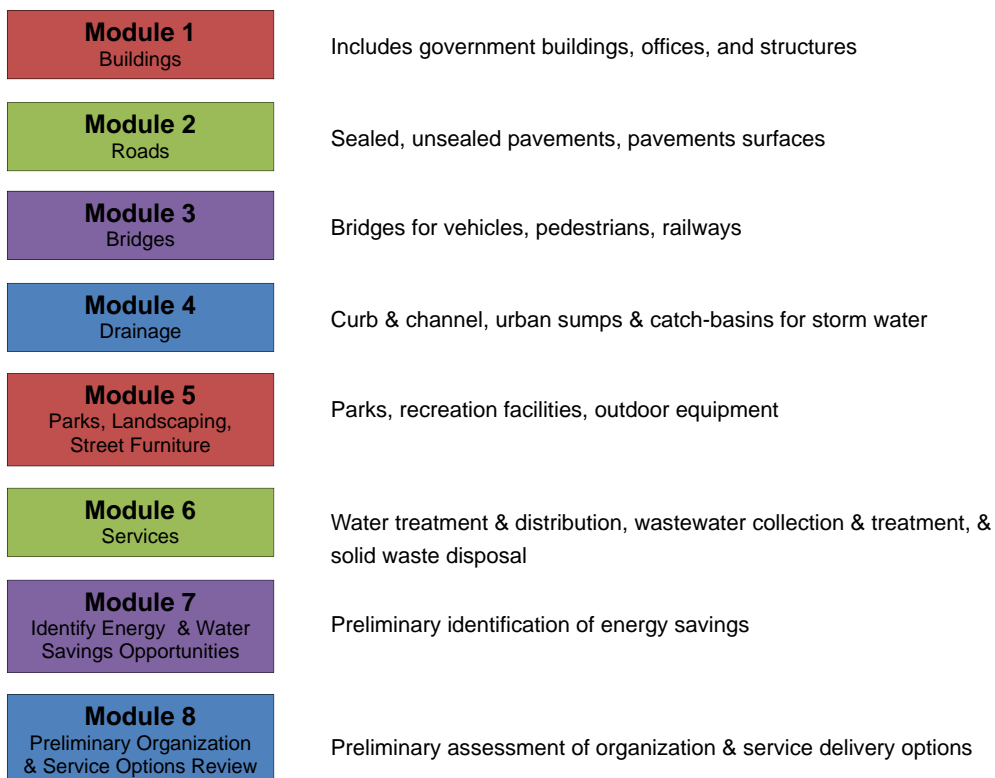
アメリカの連邦・地方自治体でのCFMP

Phase 1 Steps to Implementing CFMP



Phase 2 Asset Management Approach

Field Evaluation of Assets - Modules



Asset Condition Assessment

Specific Rating Criteria

Specific Rating Criteria	Criteria	Condition
1	A new, near new or rehabilitated asset	Excellent
2	An asset that has been well maintained with slight condition decline since construction	Good
3	An asset in fair overall condition with some deterioration and service ability loss	Fair
4	An asset in poor overall condition with severe deterioration and limited service ability	Poor
5	An asset that has failed and is no longer serviceable	Unacceptable

アメリカではインフラ・公共施設（運輸、水、下水、ごみ処理、学校、エネルギー等）の更新・開発の分野でPPP，民間企業参加は今後大きく拡大が予測される。

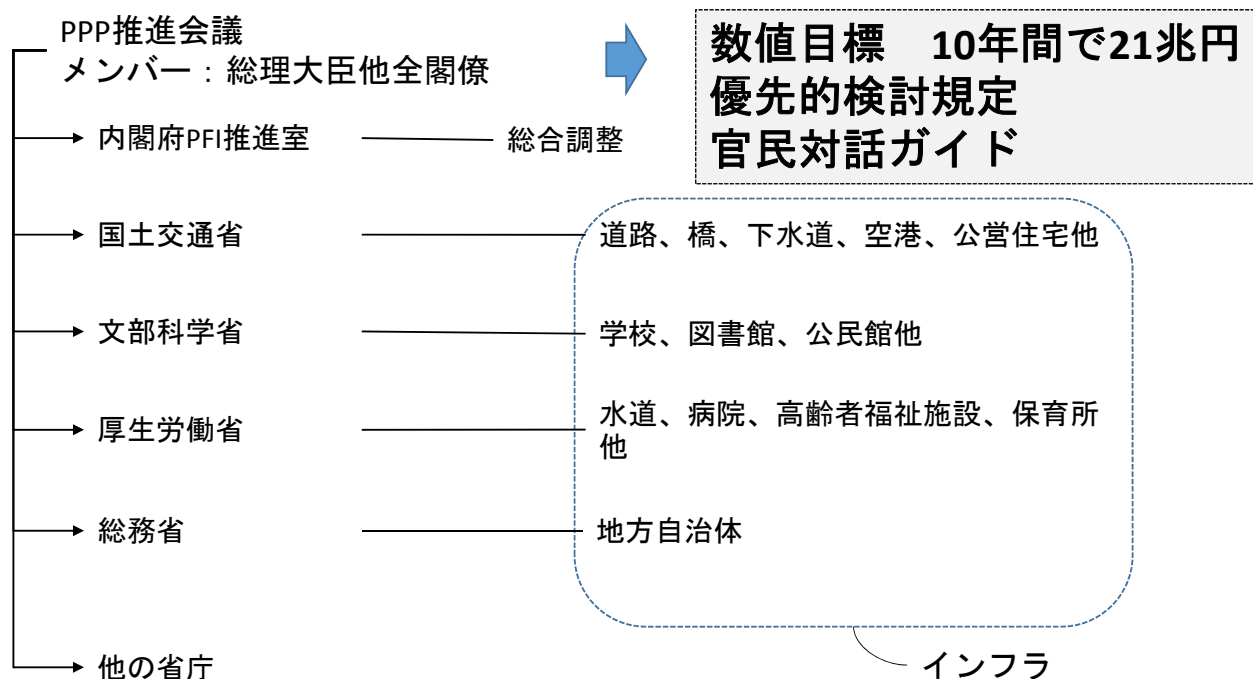
0 日本におけるPPPの歴史

- 1980's 中曽根政権 民営化 (JR,NTT,JT)
インフラ整備 “第三セクター” (官民共同出資会社)
- 1992 バブル経済崩壊、多くの第三セクターが破たん

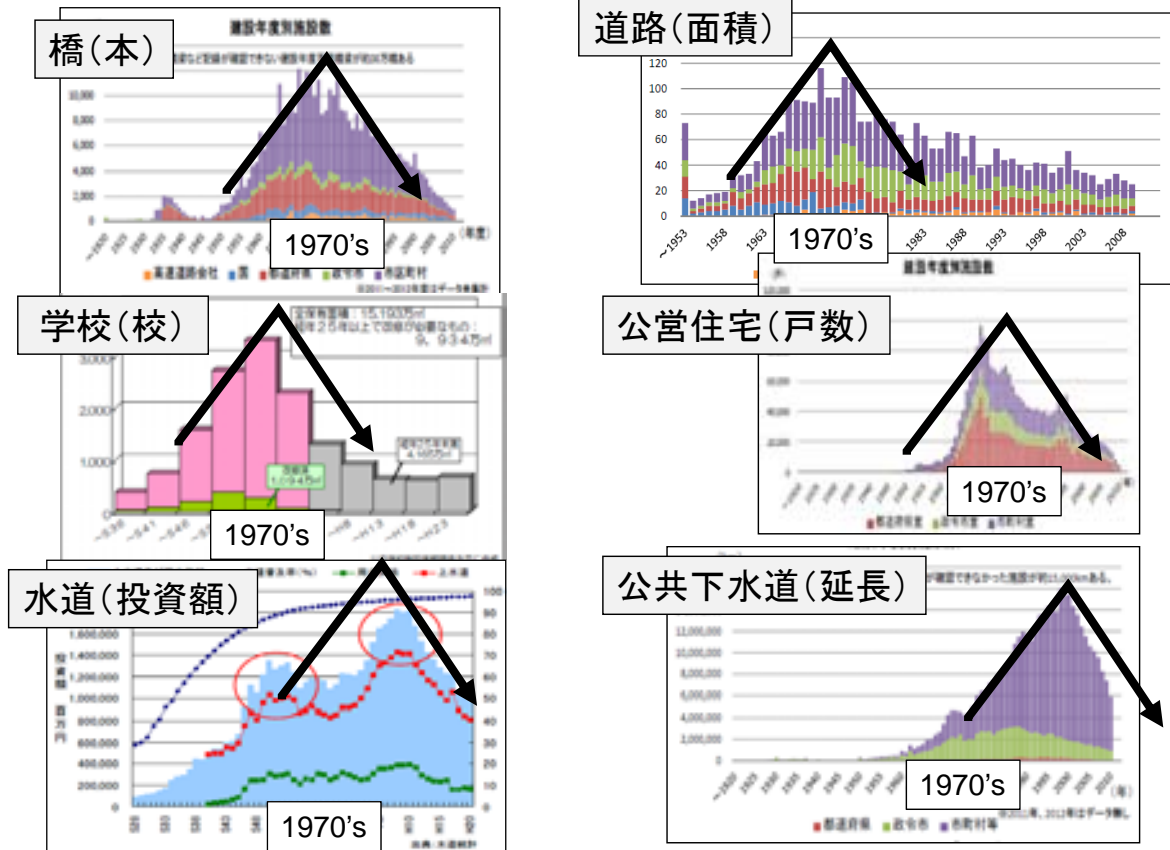
リスク、契約

- 1999 PFI, PFI 法施行・・・大型新規施設等400件以上
- 2003 指定管理者, 地方自治法改正・・・既存小規模施設等7万件
- 2006 市場化テスト, 公共サービス改革法施行・・・サービス
- 2011 PFI法改正 (コンセッション追加)、第1次PPP/PFIアクションプラン

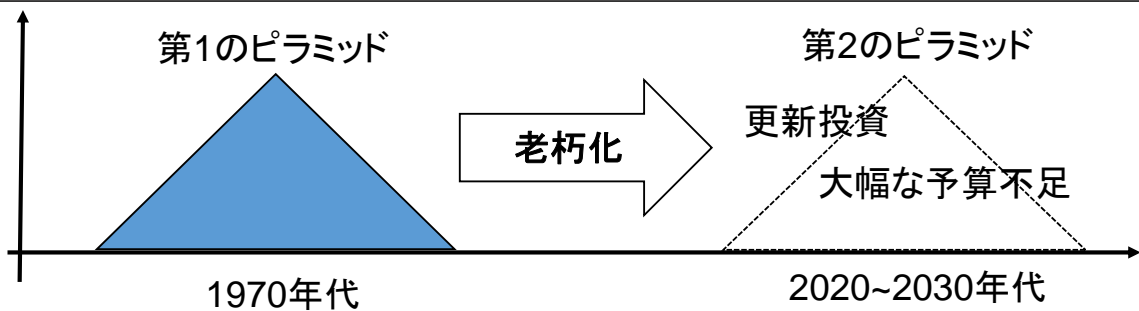
1 PPP 推進組織



2 日本の分野別公共投資の量の推移



3 インフラ老朽化問題

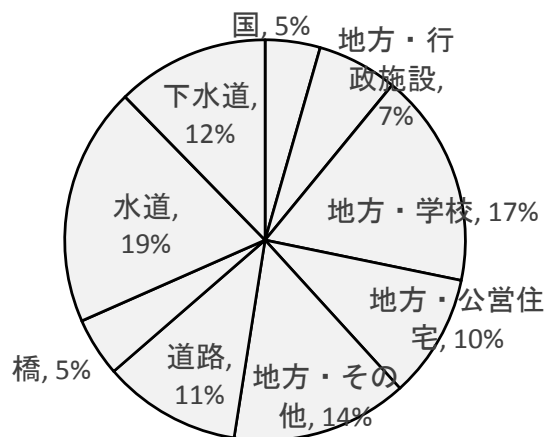


笹子トンネル天井版崩落事故(2011)



更新投資金額試算

8.8兆円/年



4 インフラに関する組織・計画

高齢化
少子化
人口減少
インフラ老朽化

→ 公共投資の政策の転換

東洋大学標準モデル

関係省庁連絡会議（事務局：国土交通省）

インフラ長寿命化基本計画

→ 各省庁の行動計画
(2014~2016)

→ 自治体の行動計画＝公共施設等総合管理計画
(2014~2016)



種類	方法
公共施設（建築物）	統廃合 広域連携 多機能化 民営化／PPP
道路、橋、水道、下水道	予防保全 長寿命化／短寿命化 リスクベースメンテナンス（RBM）
その他（共通）	IT デリバリー コンパクト化