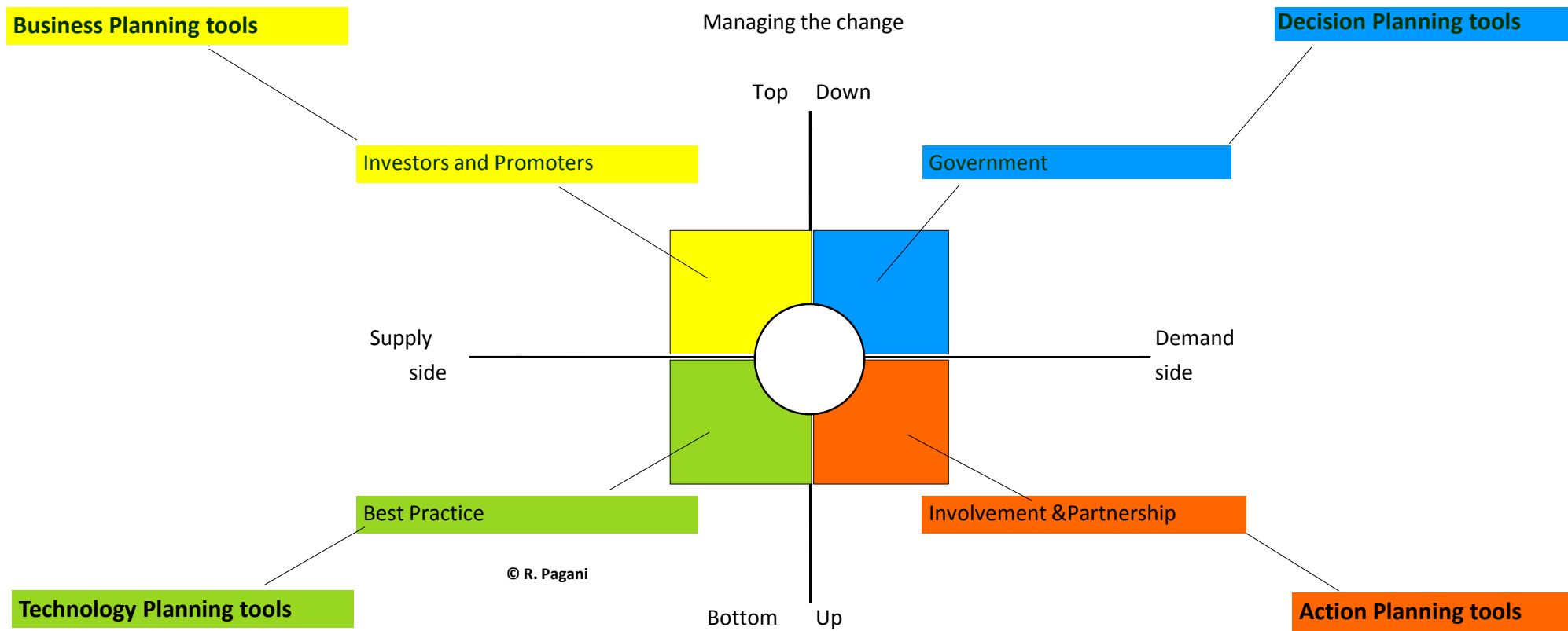


DEMO_ZONE_TOOLKIT





		Research		Demonstration				Dissemination			
		Strategy	Analysis	Project Identification	Partnership Identification	Project Formulation	Project Implement.	Monitoring Assessment	Training	Awareness	
Decision Planning Tools	Stakeholder Mapping										
	Identification Session										
	Logframe Matrix										
Action Planning Tools	Sharing Event										
	Vision Workshop										
	Planning for Real										
Technology Planning Tools	Energy Action Plan										
	Low Carbon Assessment										
	Multicriteria Analysis										
Business Planning Tools	Project Finance										
	Performance Financing										
	Green P. Procurement										

项目案例)

地点
丹麦

什么

世界上市政府越来越是绿色金融的地方推进者和协调者。丹麦政府通过合作担保和债务融资来积极推进与地区供热系统相关的沼气项目就是一个很好的例子。

地区供热系统需要大量资本投资，其经济和财务可行性取决于：1) 在供热地区的高接入率，2) 降低债务融资的成本。

如何

- 项目公司：是沼气项目的贷款接受者，是一家非盈利、由消费者拥有的地区供热公司；
- 地方政府：担保由丹麦银行提供的项目融资贷款；
- 丹麦银行：由丹麦地方政府拥有和合作担保的银行，根据其法定地位，该银行仅提供地方政府100%担保的项目贷款。这种制度安排使得银行有3A级别的信用等级，对于其从国际资本市场筹资是非常重要的。

结果

其结果是，沼气项目得到了具有高度竞争性利率的长期贷款。由地方政府担保来为地方基础设施开发获得项目融资的理念对于许多国家低碳能源和城市基础设施的开发是有借鉴作用的。

其他结果

这类地方政府融资机构在欧洲已经有200年的历史了，并有了重大变化：

- 融资成本的大幅度下降：大大低于商业银行
- 大力改善地方政府信誉的经验具有可复制性
- 地方政府融资机构不受金融危机的影响—任何时候融资都非常安全

为支持地方可持续城市开发，以欧盟和中国合作建立的系统创新绿色融资伙伴机制将注重：

- 可持续城市开发
- 清洁技术的出口和投资

Project_practice

Where: Denmark

What

Municipalities across the world have become increasingly engaged as local promoters and coordinators of green finance. Danish Government's work on promoting the biogas system attached to district heating system through the combination guarantee and debt finance is an illustrative example.

District heating systems are capital intensive and their financial economic viability depends on: 1) High and fast connection rates in the area of supply 2) getting the cost of debt finance down.

How

- **The project company:** loan taker of the biogas system and is a not-for profit consumer owned district heating company;
- **The local municipality:** guarantees a project finance loan given by the Danish Bank for Municipalities (Kommunekredit);
- **Kommunekredit:** joint owned and jointly guaranteed by all Danish municipalities and can according to its statutes, only lend against a 100% municipal guarantee. This set-up enable to the Bank to have a "AAA" rating – which is essential to secure its financing from the international capital market.

Outcome

As a result, the biogas plant gets a long-term loan at the highly competitive interest rates. This concept of municipal backed guarantee to facilitate access to project finance for local infrastructure development could be relevant for low-carbon energy- and urban infrastructure development in many countries.

One step further

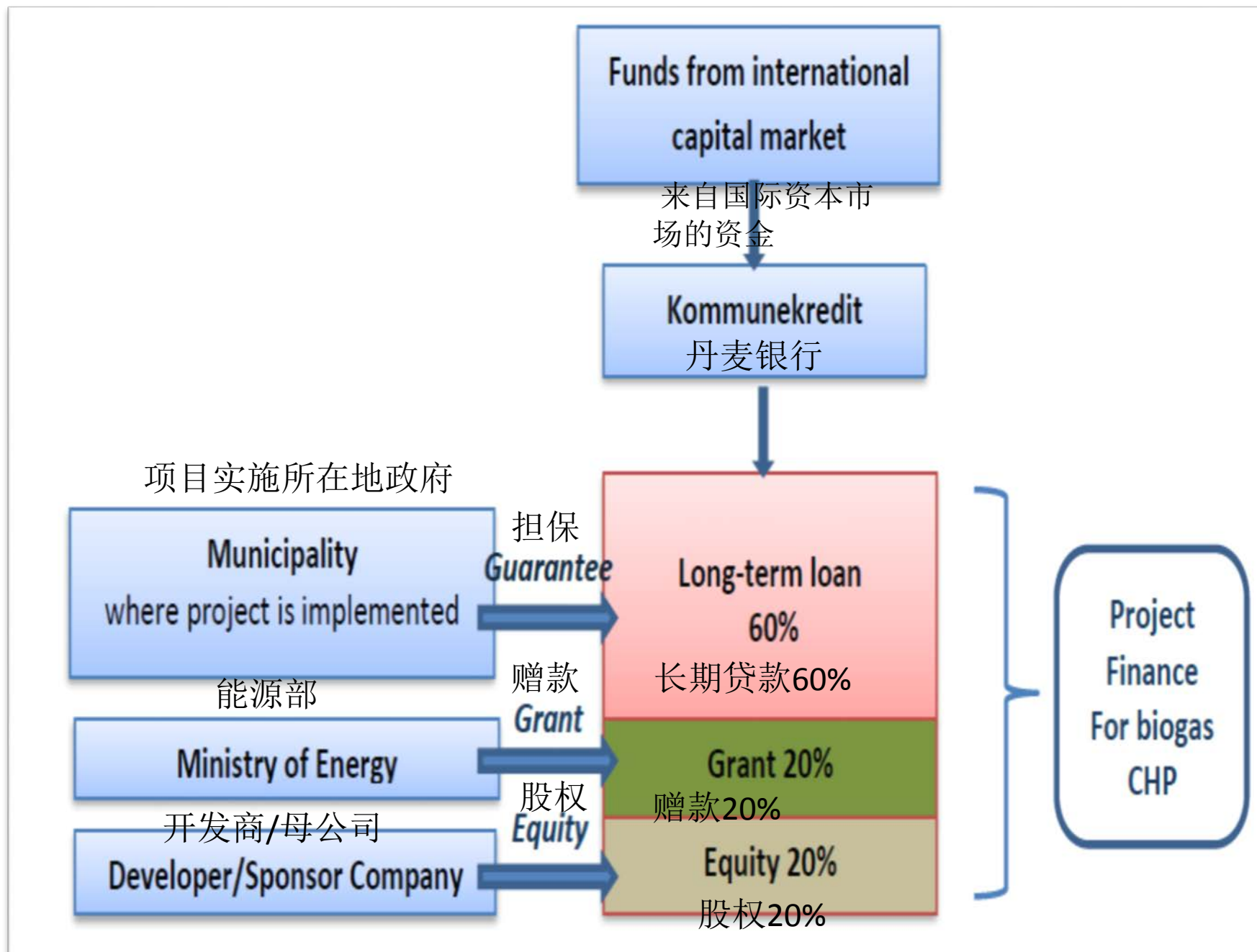
These kinds of Local Government Funding Agencies (LGFA) have 200 year history in Europe and have demonstrated important changes:

- Huge cost reductions in financing costs – much lower than commercial banks
- Strong improvements in the municipal creditworthiness best practices replicated
- LGFA is resilient in financial crisis – funding secure at all times

A systematic approach to innovative green finance partnership, in form of a **EU-China Vehicle for Regional Sustainable Urban Development?** With a focus on:

- Sustainable urban development
- Export of and investment in clean-tech

Source: *Public Backed Guarantees as policy instruments to promote clean energy*, UNEP, 2010



基于生物燃料的热电联产项目融资

步骤

第一步：准备投标

母公司（开发商）评估项目可行性（如技术、法律、环境）

第二步：特许合同

所在国政府项目招标（采购过程）和授予合同给一家母公司（开发商）。母公司（开发商）和所在国政府签订特许合同

第三步：项目公司

母公司成立一个实体，即项目公司/特别目的机制以从事某项目

第四步：融资和 承购合同

母公司（开发商）筹集项目资金（融资），安排承购合同，即购买者购买由项目产生的商品和劳务的合同

第五步：建设和服务合同

母公司（开发商）与分包商、设备和服务供货商签订合同

第六步：完成

母公司（开发商）监控建设过程。一旦完成，项目交回给所在国政府，自己运营或转给另一私人机构

Procedure

Step 1 : Preparation for bidding

The sponsor company assesses project viability (e.g. technical, legal, environment) before bids on project

Step 2: Concession agreement

Host government tenders a project (procurement process) and awards the project to a sponsor company. The sponsor company and the host government sign a **concession agreement**

Step 3:: Special Purpose Vehicle (SVP)

The sponsor company establish an entity, i.e. project company/special purpose vehicle that will conduct the project

Step 4: Financing & Off-Take agreement

The sponsor company assembles financing for the project and arranges the off-take agreement, in which pre-determined agreements with the buyer to purchase some amount of the goods or service produced

Step 5: Construction and Service Contracts

The sponsoring company works out agreements with subcontractors, equipment, service providers

Step 6: Completion

The sponsoring company will oversee construction. Upon completion, it will either hand back the project to the host government, operate the site itself or transfer operation to another private entity

项目案例

地点
英国

什么

英国的“绿色交易项目”一到2020年改造、更新改造1千4百万的英国居民住宅，其中7百万住宅已经愿意得到比较深入和全面的改造。得益于德国改造投资计划（由KfW支持）的成功经验，英国绿色投资银行专注于解决居民建筑物改造的特定障碍：

- 对于家庭：受限于资金和高的资本成本；
- 对于投资者：对于高能源效率产品的有限需求，并由于交易费用高而使得这些投资机会高度分散；
- 对于能源事业单位：没有足够的资本金投资在需求方（而注重在供给方的低碳化）。

如何

鼓励家庭有更高的需求—推出高能源效率的产品。

家庭的前期资本金从何而来？

- 由绿色债券和公共资金来源融资的公私混合资本金
- 用于担保基金的公募资金。

如何分配贷款？

- 根据支付能力提供补贴贷款

如何收回投资回报？

- 长期与地点相连续的特别收费：因你节约而付费的系统
- 体现在电力帐单/税收清单，并通过能源提供者/地方政府转移到最初投资者

Project_practice

Where

United Kingdom

What

The “Green Deal” of the UK – upgrade energy efficiency of 14 million British homes by 2020, with 7 million having been offered a deep, whole of house retrofit. Inspired by the successful experience from Germany’s retrofit investment schemes (by KfW), the UK’s Green Investment Bank targets the specific barriers to retrofit projects of residential building sector:

For households: limited access to and opportunity cost of capital;

- **For investors:** limited demand for energy efficiency products and a highly fragmented opportunity with high transaction costs;
- **For energy utilities:** insufficient capital available to invest on the demand side (when the focus is on the decarbonization on the supply side).

How

To encourage greater demand from households – to deliver energy efficiency **at scale**.

Where does the upfront capital for households come from?

- A public/private blended capital programme funded by **green bonds** and **public funding sources**.
- Public fund used as “**guarantee fund**”

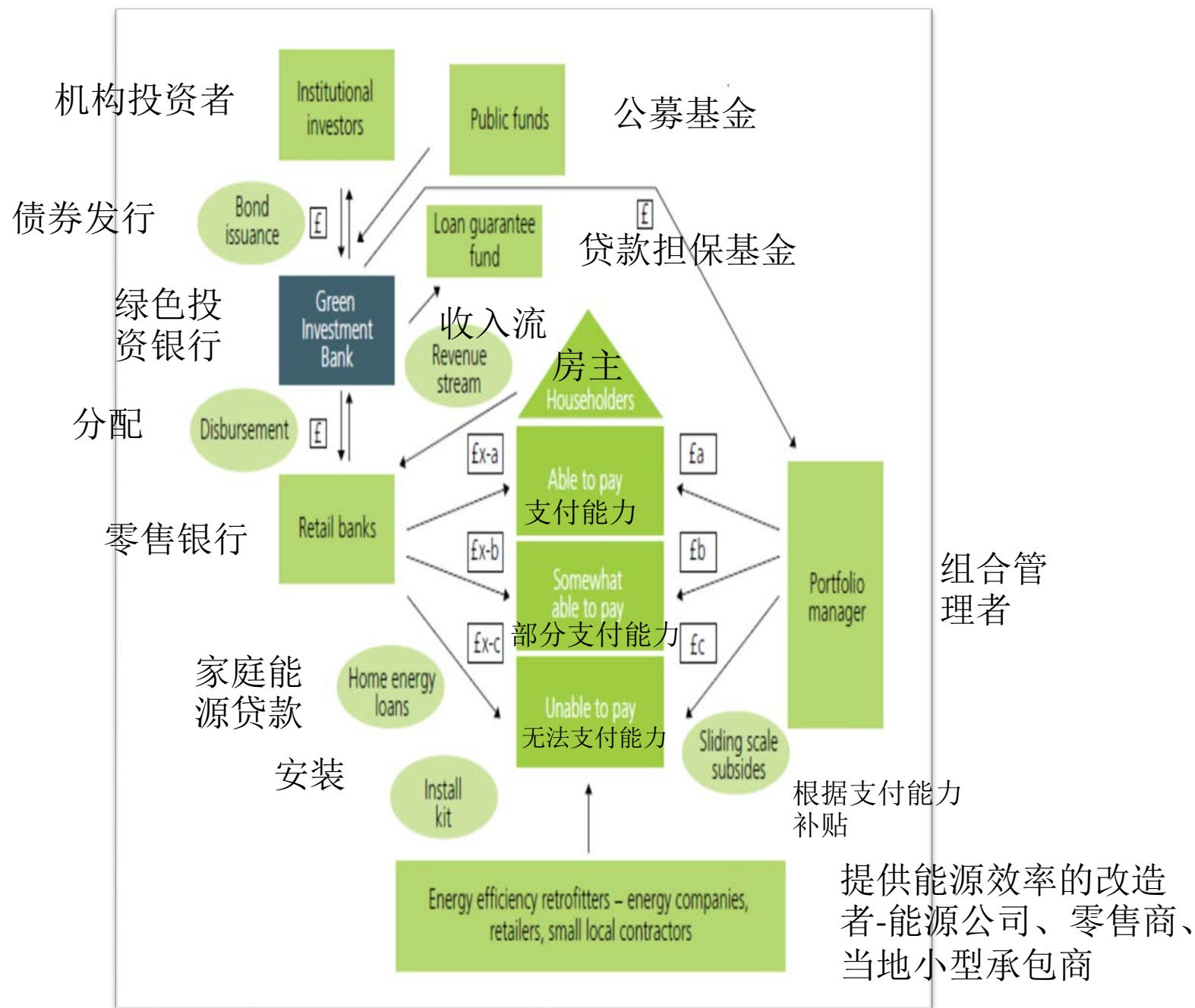
How is it disbursed?

- **Subsidised loan** on the basis of **ability to pay**

How it is paid back ?

- A long-term location specific charge: **Pay-as-you-save system**
- Embedded in the electricity bill/tax bill and passed on via the energy supplier/local authority to the original investor

Source: *Unlocking investment to deliver Britain’s low carbon future*, Report by the Green Investment Bank Commission



步骤

政府发起支持居民能源服务公司以开发成功的商业模式，消除障碍，并提高成功率

第一步：教育和信息

提高意识和为商业建筑所有者和居民建筑所有者提供信息

第二步：绿色/能源效率的评估

为评估者和承包商提供培训项目，以便具有执照的能源评估者能够评估居民和建筑物，并根据绿色效益和成本提供改造的建议

第三步：绿色建筑的融资

创造融资刺激机制和可行的融资工具以支持更新改造

第四步：绿色建筑的技术援助

为建筑商提供培训。这些建筑商监控工程以确保可测的能源节省和满足住宅所有者和建筑物所有者。

Procedure

Government initiatives to support residential ESCOs to develop successful business models to remove barriers and scale up uptake

Step 1 : Education and information

To increase awareness and provide information for commercial building owners and home owners

Step 2: Green/energy efficiency audit

Training programs for auditors and contractors, so these certified energy auditors can inspect home and buildings and recommend retrofits/renovation with estimated green benefits and costs

Step 3: Financing green building make-over

Creating financial incentives and feasible financing instruments to support retrofits/renovation

Step 4: Technical assistance for green building make-over

Training for constructors who can monitor and oversee the process to ensure predicted energy saving and satisfaction of homeowners and building owners

项目案例

地点

瑞典

什么

绿色政府采购工具是2009年以来瑞典气候变化法律的一部分。

自从2009年2月1日，政府的所有汽车购买和租赁的必须是绿色汽车。绿色汽车必须用做出租车和租赁汽车。

成果

- 对于成本效益没有独一无二的答案：取决于购买什么绿色汽车和多大购买量。例如，购买经济型的柴油汽车可能出现节省，而购买乙醇燃料的汽车可能出现成本上升；
- 直接的CO₂排放的下降影响相对有限，但已经导致消费和生产的转移，并推动瑞典绿色汽车市场的繁荣。例如，2010年新注册的汽车销售中，绿色和其他汽车达到创纪录高的263653辆，是2005年的6.5倍。

什么是新的

通过使用创新性的采购以作为问题的解决工具，而不是限制政府采购来寻找现有的答案，政府需求可以主动推动将来新产品和新功能的开发。

Project_practice

Where

Sweden

What

The green public procurement instrument is part of Sweden's climate bill from 2009. Green cars procurement is one of the most important instruments.

Since 1 February 2009 all automobiles purchased or leased by Swedish government agencies must be green cars. Green cars must also be used by those ordering taxis or rent cars.

Outcomes

- No unequivocal yes or no regarding **cost-effectiveness**: depending on what kind of green cars are procured and in what volumes. For instance, buying eco-classified diesel cars have led to a saving whereas buying ethanol cars has led to a cost increase;
- **Direct CO₂ emission reduction effect** is relatively limited, but has brought about **shift in consumption and production** and has given a boost to the green car market in Sweden. For instance, new registered car sales in 2010 for green and other cars reached a record high of 263,653 units, which was roughly 6.5 times higher than in 2005.

What is new?

By using innovation procurement as a problem-solving tool, and **not** restricting public procurement to existing solutions, public sector demand can actively drive the development of **new products** and **functionalities** for the future.

如何

什么环境标准适用？

- 汽油或柴油汽车可能每公里排放不超过99克的CO₂；
- 轻型商务汽车可能每公里排放最高230克的CO₂；
- 政府机构必须确保汽车最大限度使用可再生燃料；
- 汽车和燃料的购买每年向中央政府（环保部）报告一次。

其他方面—为绿色创新的绿色政府采购

作为买者和消费者，政府应该通过开拓新市场和使得新理念成为创新和成本效益的解决方案（以对付全球环境和社会挑战）来刺激创新和增长。

2011年瑞典发起第一个前期商业创新采购计划。

How

Which environmental standards are applied?

- Petrol or diesel driven automobiles may emit no more 99 grams of CO₂ per kilometre;
- Light commercial vehicles may emit a maximum of 230 grams of CO₂ per kilometre;
- Government agencies must ensure that the cars use renewable fuels to the greatest possible extent;
- Purchases of vehicles and fuels are reported to the central government (Ministry of Environment) once a year

One step further - Green Public Procurement for Green Innovation

As buyer and customer, the public sector can also stimulate innovation and growth by opening new markets and enabling new business ideas that contribute to innovative and cost-effective solutions to tackle global environmental and social challenges.

Sweden launched its first Pre- Commercial Innovation Procurement (PCP) programme in 2011.

步骤

采购过程是一个复杂的过程。以下是成功执行绿色采购的主要步骤。

第一步：准备

- 从事计划中的采购活动和组织安排的支出分析
- 选择应注重哪一产品/服务

第二步：目标制定

- 注重支持措施的可操作性目标
- 与购买活动相关的特定目标

第三步：制定行动计划

为实现目标而计划的活动和指定的任务：

- 投标
- 监控
- 交流

第四步：执行行动计划

第五步：监管过程和报告结果

- 评估满足目标的进展和报告成绩
- 发现面临的问题和提出解决的方案

Procedure

The procurement process is a complex one. Below are key steps in the practical implementation of a successful green procurement.

Step 1: Preparation

Carry out an **expenditure analysis** of planned procurement activities and organisational arrangements
Select which product/service groups to focus on

Step 2: Target setting

- Operational targets focusing on support measures
- Specific targets directly relating to purchasing activities

Step 3: Developing the Action Plan

Plan activities and assign responsibilities for achieving the targets, including:

- Tendering
- Monitoring
- Communication

Step 4: Implementing the Action Plan

Step 5: Monitoring progress and reporting results

- Assess progress in meeting targets and report on achievements
- Identify problems encountered and develop solutions