

FreeBalance®
Good Governance



**Automating Good Governance:
Use of Technology in Public Financial Management**



Introduction to Governance and Government Resource Planning (GRP)

The Governance Issue

There remains debate on the definition and impact of governance in the public sector. Numerous governance indicators are used by civil society, international financial institutions and standards organizations. These indicators operate at different levels of governance abstraction. Ideology and theory play significant roles in the determination of indicators. And, governance concepts are notoriously difficult to measure, are rarely current and use many substitutes or proxies.

The quest to identify the most important characteristics suffers from the multivariate nature of governance and what Francis Fukuyama calls the “[tainting of output measures by exogenous factors](#)”. And, numerous observers, like former British Prime Minister Tony Blair, recognize that there are no easy governance answers: “[By governance, I don't just mean transparency, as important as that is, but also the ability of governments in developing countries to get things done.](#)”

Despite this environment, there is significant evidence that governments with better governance ratings provide improved outcomes and citizen services. Through [an analysis of the World Governance Indicators](#), Kaufmann, Kraay, and Mastruzzi, Massimo have demonstrated statistical relationship between governance and outcome.

The Governance Reality

The set of available, yet imperfect, governance indicators are the reality for evidence-based decisions, particularly in developing countries. Matt Andrews has pointed out that reforms in developing countries are often “[directly shaped by indicator scores and their underlying ‘best practice’ dimensions, with countries apparently buying into the implied story that ‘this is what good government looks like’](#)” and are “[fixtures in global public sector reform programs.](#)”

The desire to fashion governance indicators to outcomes has created an institutional focus. This focus on institutions like anti-corruption commissions and institutional characteristics such as capacity and political will have been critical to governance reform efforts in developing countries. Yet, governance initiatives often have a “[bias towards formal institutions](#)”, according to Andrews.

There seems to be a general distrust of so-called “technical reforms” in which laws are changed or new procedures introduced. There is strong evidence that these reforms fail to meet objectives unless there are certain institutional characteristics. Yet, as pointed out by Wild, Chambers, King and Harris, “[concepts like ‘political will’ or the existence of ‘weak incentives’ are often referred to but rarely further developed in terms of the specific institutional and governance arrangements,](#)” so a broader understanding of governance dependencies are required.

Public Financial Management reform is acknowledged to be a mechanism to improve good governance. De Renzio and Dorotinsky suggest that “[the quality of public financial management \(PFM\) systems is a key determinant of government effectiveness. The capacity to direct, manage and track public spending allows governments to pursue their national objectives and account for the use of public resources and donor funds.](#)”



Information and Communications Technology (ICT) initiatives such as Government Resource Planning (GRP), sometimes known as Financial Management Information Systems (FMIS) for government, are seen as an expression of PFM reform. Diamond and Khemani suggest that [“the establishment of an FMIS has consequently become an important benchmark for the country’s budget reform agenda, often regarded as a precondition for achieving effective management of the budgetary resources. Although it is not a panacea, the benefits of an FMIS could be argued to be profound.”](#)

Fritz, Lopes, Hedger, Tavakoli and Krause found in a study of post-conflict countries [that budget execution reforms tend to be more successful](#) for sustained PFM reform. The countries identified in the study as having achieved substantial reform had implemented GRP. Steven Symansky suggested [that in the early stages, budget execution is more critical than budget preparation – computerisation can help](#). Symansky concludes that [transparency is enhanced and corruption opportunities reduced if there is a strong focus on budget execution](#). The question then is: how can automation enable long term improvements in governance outcomes? What elements of budget execution can be automated? Can similar governance outcomes be achieved in budget preparation and non-financial functions such as civil service workforce management?

Towards GRP to Governance Framework

Fukuyama suggests that [“governance is about the performance of agents in carrying out the wishes of principals, and not about the goals that principals set. The government is an organization which can do its functions better or worse; governance is thus about execution, or what has traditionally fallen within the domain of public administration, as opposed to politics.”](#)

Governance is about money: the effectiveness and efficiency of leveraging government revenue for government outcomes. PFM is about budget management, financial and associated non-financial management. GRP is about the control and automation of PFM processes.

Fiscal transparency enabled through ICT front and back-office systems is an important theme in governance. Min Zhu suggests that [despite the significant gains made since the late 1990s, the transparency of information about the state of public finances remains inadequate, including as a basis for taking policy decisions](#).

The ability to identify actions that governments can take to improve governance can help overcome what Daniel Kaufmann calls [“the silent crisis plaguing the governance and anticorruption movement”](#) of not effectively making [“the transition from the awareness-raising stage to the concrete action-oriented stage.”](#)

The FreeBalance Governance Framework examines the contribution of GRP to improving governance and the factors necessary to better leverage systems. This is not an attempt to promote any so-called ‘best practices’ because better practices are related to government contexts. Matt Andrews has pointed out that [“good governments’ are not found to be more likely to adopt a ‘better practice’ PFM characteristic than other governments.”](#)



The FreeBalance Governance Framework

Governance Linkages

The FreeBalance Governance Framework links Government Resource Planning with institutional factors to achieve governance outcomes

1. GRP technology used to automate financial functions in government
2. provides a set of tools: controls, front-office, decision making
3. that are leveraged by institutions whose capabilities can improve or reduce effectiveness
4. that has positive or negative effects that are exposed in measures like credit ratings or corruption perception
5. that are used for important composite indicators like World Governance Indicators
6. that, with other indicators, show governance outcomes such as economic growth or educational improvements



The working premise for the governance framework includes:

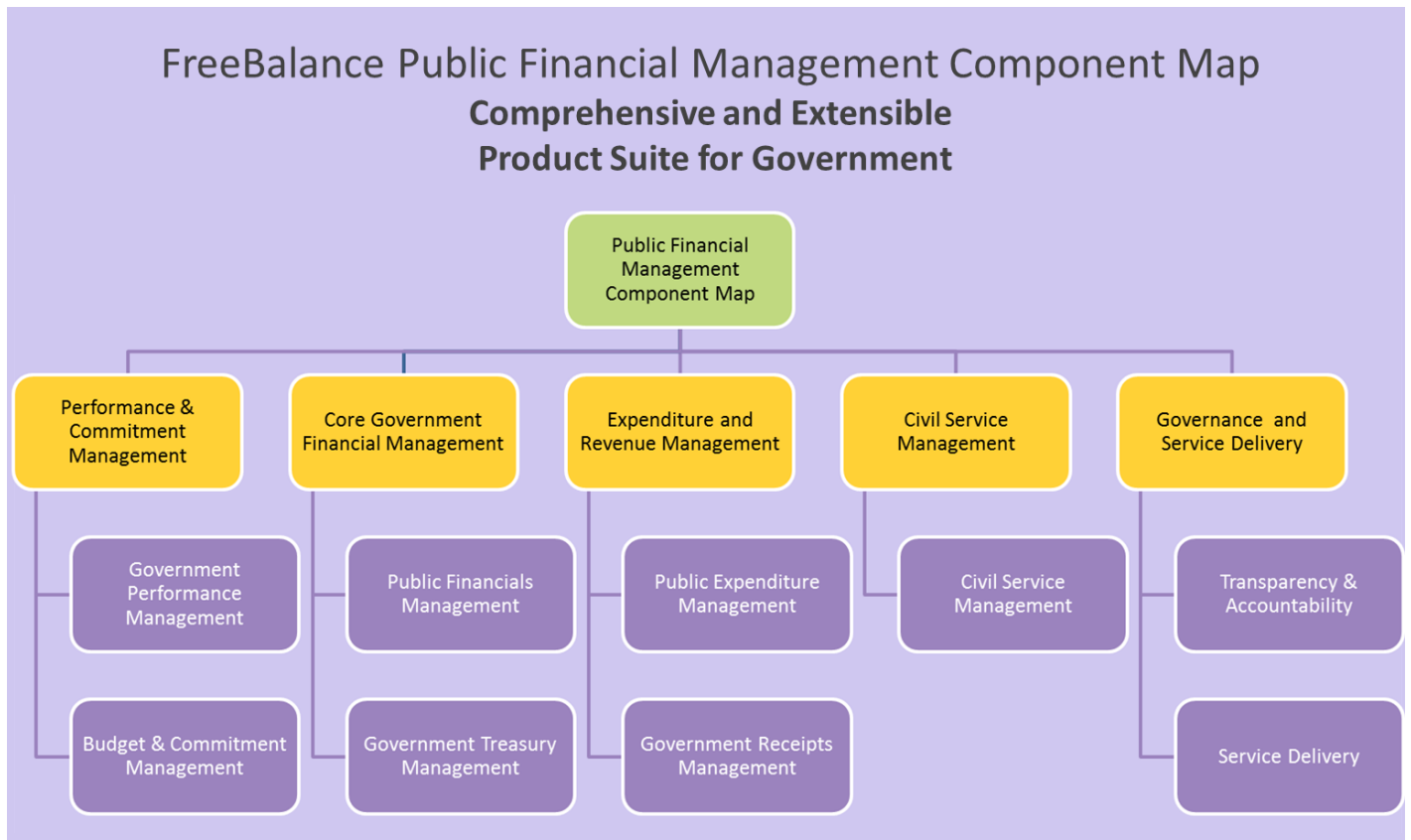
- Different levels of governance factors are in use when evaluated countries
- There is no implied weighting of any governance factor at this time other than it is likely that all factors have some influence
- There is no implied sequencing of PFM reforms in the FreeBalance Governance Framework but this analysis is used by FreeBalance as part of a Governance Valuation process that determines sequencing
- There is no implied contribution effect for any governance factor (where some factors may need to reach a nominal level to have any material affect) and some factors (such as high capacity high autonomy in the public service could reduce governance) may have complex curves



- It is challenging to identify where a popularly used governance indicator is placed in the FreeBalance Governance Framework
- Virtually every governance measurement in use have flaws (methodology, comprehensiveness, ideology), but it is likely that these flaws have less effect when considered in aggregate
- It is important to understand where exceptions can occur through exploring scenarios and real-life experience
- Despite flaws, governance indicators are used by businesses, donors, journalists and credit agencies. There are incentives for governments to improve these indicators including the use of technology

Layer 1: Government Resource Planning (GRP)

GRP represents software that automates PFM functions. FreeBalance uses the PFM Component Map to define the categories of software provided by FreeBalance, competitors, third parties and developed in-house by governments. FreeBalance makes no value judgement about the effectiveness of any software component from any vendor in the FreeBalance Governance Framework. The ICT characteristics that enable governance are described. It is possible that an ICT solution used for PFM by a government may not include important features that can enable good governance.





The PFM Component Map includes:

- *Government Performance Management (GPM)* includes reporting, analytics, dashboards, Chart of Accounts design, risk management and multiple year budget formulation
- *Budget and Commitment Management (BCM)* includes budget and commitment controls and commitment tracking with budget adjustments
- *Public Financials Management (PFM)* includes accounting and associated functionality such as asset management and inventory control
- *Government Treasury Management (GTM)* includes cash, aid, debt and investment management functionality with bank integration and reconciliation
- *Public Expenditure Management (PEM)* includes government purchasing, procurement, grant, contract and payment management
- *Government Receipts Management (GRM)* includes all tax and non-tax revenue sources
- *Civil Service Management (CSM)* includes the human resources lifecycle with financial functionality including payroll, time and attendance, travel and subsistence and pensions
- *Transparency and Accountability* includes front-office functions designed to increase government accountability such as transparency portals or corruption reporting
- *Service Delivery* includes government financial services designed to improve service delivery such as e-procurement and on-line licensing

Layer 2: Governance Tools

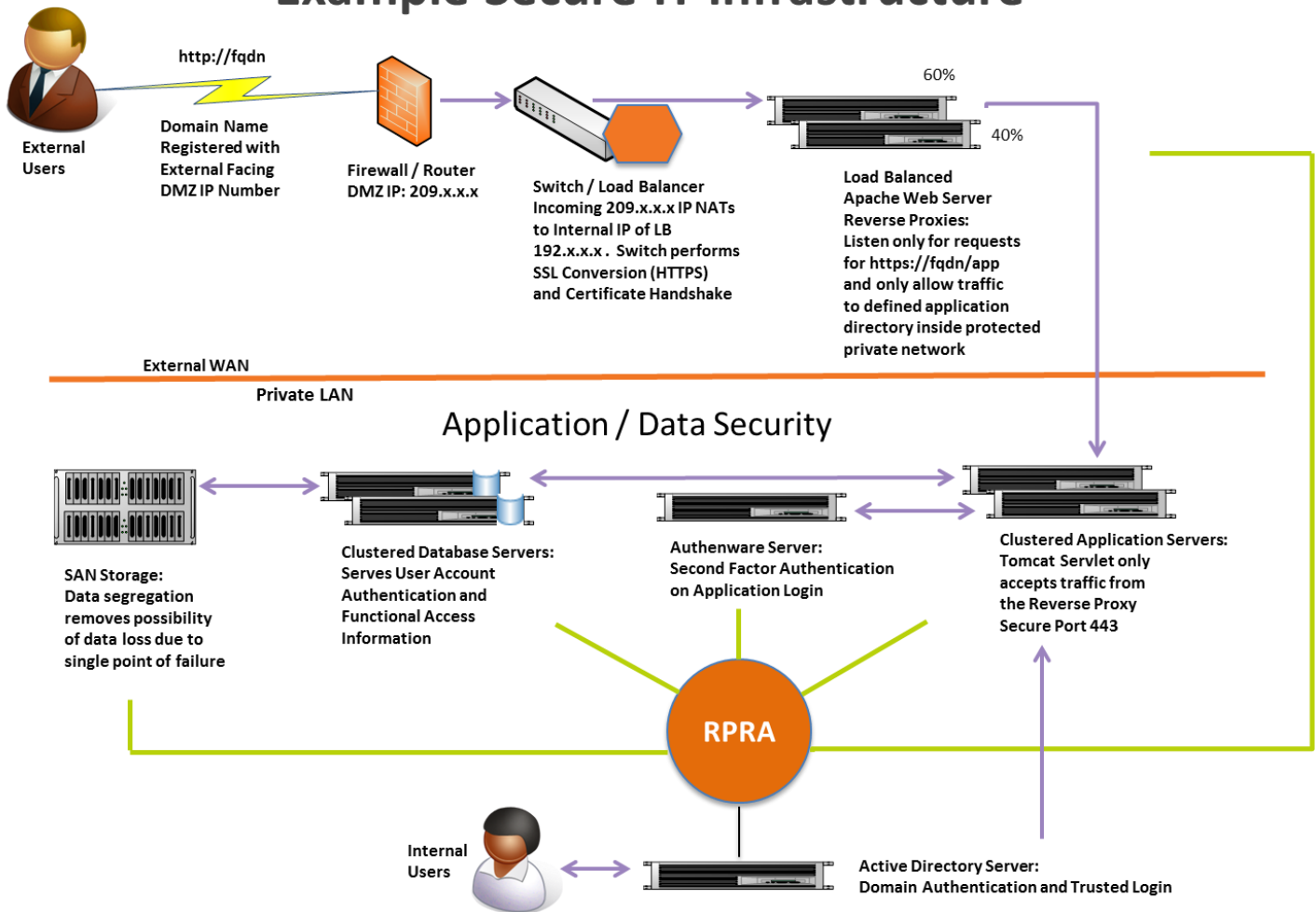
ICT Governance Tools

GRP systems include functionality designed to reduce ICT vulnerabilities. Governments augment this functionality through the use of ICT tools and leverage good practices to reduce ICT threats.

ICT Vulnerability	Technique									
Database	Data Integrity	Obfuscation	Encryption	Biometrics	VPN	Security Policy	Security Audit	Audit Trail	Transaction Audits	DB Abstraction
Network										Sniffing
User Identify										Integration
Interfaces									External Transparency	
Reports									Intrusion Detection	
Intrusion										



Example Secure IT Infrastructure



Although manual paper-based systems are fraught with corruption opportunities, governments should reduce the risk of ICT manipulation by internal government or external sources.

ICT vulnerabilities include:

- *Databases* where individuals could change transactional information with the database that results in improper payments, manipulates transactional information or hides transactions
- *Network* where individuals can identify transactions in progress
- *User Identity* where individuals can steal user names and passwords to manipulate transactions
- *Interfaces* where individuals can change information between systems
- *Reports* where individuals can change the content of financial reports
- *Intrusion* where individuals can connect into government networks externally



The following ICT solutions and good practices can significantly reduce the likelihood of ICT-enabled corruption:

- *Data integrity* within GRP systems identifies when a piece of data has been manipulated or will not allow the data to be changed in the database or via scripts
- *Obfuscation* is a software technique used in GRP to prevent individuals from understanding the logic of the underlying code, which is further strengthened when individuals do not have access to GRP source code
- *Encryption* of data makes it difficult to access important data
- *Biometrics* makes it difficult to steal user identity to manipulate databases or reports
- *Virtual Private Networks (VPN)* restricts access to the GRP system and tracks usage
- *Security policies* such as password rules, password reset and timing out reduces the opportunity for data manipulation
- *Security audits* track every change in the ICT system including the database, operating system and middleware to identify manipulation attempts
- *Audit trail* ensures that every transaction in the system can be stored and compared with the results from the system
- *Transaction audits* enable auditors to trace all transactions to identify manipulate of information and to recommend improved processes such as segregation of duties and security policy changes
- *Database abstraction* reduces the ability to manipulate information at the database level
- *Sniffing* is used to identify suspicious network or user activity
- *Integration* techniques are used to eliminate manual interface intervention
- *External transparency* through portals enables civil society to identify data manipulation acting as citizen auditors
- *Intrusion detection* systems identify attempts to hack into government networks

Governance Controls

GRP systems include internal back-office control functionality that ensures fiscal discipline and reduces corruption opportunities. These operate across GRP functions and some or significant controls.

- *Chart of Accounts* or budget classifications is the metadata structure for all government transactions and is integrated into user and group security to ensure that individuals can only handle functions for which they are authorized
- *Budgets and Commitments* provide transaction controls to ensure that budgets are not overspent including salary budgets and integration with revenue and treasury systems
- *Segregation of duties* ensures that individuals do not have access to multiple steps in transactions
- *Secure Payment* provides secure cheque printing and electronic funds transfer to prevent manipulation while improvement efficiency of government payments



	GPM	BCM	PFM	GTM	GRM	PEM	CSM
Chart of Accounts							
Budgets & Commitments							
Segregation of duties							
Secure Payment							
Integration							
Reconciliation							
Workflow & Procedures							
Approvals							
Accrual							
Asset Management							

- *Integration* capabilities within GRP applications through web services support and the use of Service-Oriented Architectures (SOA) facilitates integration within the GRP suite and to GRP subsystems to reduce errors, improve efficiency and eliminate manipulation of data among systems
- *Reconciliation* capabilities within the GRP traps errors from external systems and ensures that transactions have been completed
- *Workflow and Procedures* enables setting business rules and workflow that follows government fiscal practices to improve efficiency and reduce the impact of dangerous informal practices
- *Approvals* ensures that all transaction stages have been approved by the proper authority
- *Accrual* accounting provides better visibility than the cash-basis of accounting on the true state of government financials to improve planning and decision-making while reducing the effects of government arrears
- *Asset Management* provides better information on the state of government assets, replacement needs, recurrent costs and responsibility for those assets to improve decision-making while reducing corruption on the use and disposal of assets

Decision-Making

GRP systems provide decision-making tools to governments. This includes standard “Business Intelligence” functionality such as reports, analytics and dashboards. It also includes budget planning and macroeconomic analysis as part of Government Performance Management. Embedded decision-making functionality in GRP systems enable creating more credible budgets, anticipating the effects of macroeconomic changes and making better day-to-day decisions.



Front Office

Front office systems provide transparency across the budget cycle. Transparency changes behaviour and enables civil society oversight. International public sector standards improve the quality and understanding of government data:

- *International Public Sector Accounting Standards (IPSAS)* enables comparing information across governments for cash and accrual basis of accounting
- *Government Financial Statistics (GFS)* tracks the spending purpose
- *Construction Sector Transparency Initiative (CoST)* tracks construction cost for public investment infrastructure
- *Open Contracting* is an emerging group intending to standardize e-procurement information
- *Extractive Industries Transparency Initiative (EITI)* provides transparency on tax revenue received through extractive industries
- *International Aid Transparency Initiative (IATI)* provides transparency on aid including donors, NGOs and governments

	Core Public Financials	Expenditure Management	Receipts Management	Treasury Management	Civil Service Management	Performance Management
Standards	IPSAS, GFS	CoST, OpenC	EITI	IATI		GFS
Front-Office	financial statements	e-procure	revenue	aid, debt & PPP	e- recruit & disclosure	gov results
	budget transparency					
Decision-Making	forecasts – programs — reporting & analytics – dashboards – alerts - output/outcomes – KPIs economics – historical data - benchmarks – policy – planning – scenarios – programs					
Other Controls	assets	secure payment & secure transactions				audit
	accruals			TSA	accruals	
Commitment	budget – commitment – cash - payment					
Process Controls	chart of accounts – workflow & procedures – approval cycle - reconciliations					
IT Controls	data integrity – data encryption – IT security - integration					

Layer 3: Institutions

Numerous internal government and external institutions interact to enable improved governance. The effectiveness of these institutions is dependent on numerous characteristics such as capacity and political will. Some characteristics are more critical for some institutions.



Governance Enablers Matrix

Characteristics															
Institutions	Capacity	Political Will	Accounting Procedures	Standards	Efficiency	Risk Management	Compliance	Decentralization	Independence	Informal Mechanisms	Access to Information	Transparency	Outreach	Participation	Legitimacy
Executive															
Legislature															
Judiciary															
Internal & External Audit															
Enforcement															
Other Gov't Oversight															
Public Service															
Civil Society & Citizens															
Businesses															
Election Commission															
Political Parties															
Donors															

The efficacies of institutional characteristics are measured by civil society organizations. Some of these measurements have significant political impact in many countries.



Governance Element	Governance Measure
Access to Information	Freedom House, Freedom of Information
Budget Transparency	Open Budget Index
Revenue Transparency	Revenue Watch Index
Executive Capacity	Bertelsmann Sustainable Governance Indictors SGI Executive Capacity
Executive Accountability	Bertelsmann Sustainable Governance Indictors SGI Executive Accountability
Donor Coordination & Accountability	Public Expenditure and Financial Accountability (D) Donors
Government Accountability	PEFA C(iv) : External Scrutiny & Audit
Anti-Corruption	Global Integrity Index Transparency International Corruption Perception Index
PFM Effectiveness	Public Expenditure and Financial Accountability

Layer 4: Governance Signs

GRP functionality enables achieving improved PEFA assessments. PEFA assessments typically drive PFM reform programs.

	Core Public Financials & Budget Controls	Expenditure Management	Receipts Management	Treasury Management	Civil Service Management	Performance Management
A. PFM-OUT-TURNS: Credibility of the budget	Budget Controls	Expenditure Controls & Forecasting	Revenue Forecasting	Cash and Liquidity Forecasting	Wage Bill Forecasting	Budget Planning Processes
B. KEY CROSS-CUTTING ISSUES: Comprehensiveness and Transparency	Budget Classifications					
	Budget Transparency	E-Procurement	Revenue Transparency		E-Recruitment, Wage & Expense Disclosure	Results Portal
C(i) Policy-Based Budgeting					Talent Management	Budget Planning Processes & Performance Management
C(ii) Predictability and Control in Budget Execution	Non-Salary Controls	Expenditure Controls & Forecasting, Procurement Value for Money	Taxpayer Obligations & Tax Collection	Cash and Bank Controls	Payroll Controls	Audit trails & Computer Aided Audit Tools
C(iii) Accounting, Recording and Reporting	Timeliness and Completeness of Statements and Reports, Support for International Public Sector Standards					Quality of Reports
C(iv) External Scrutiny and Audit						Audit trails & Computer Aided Audit Tools

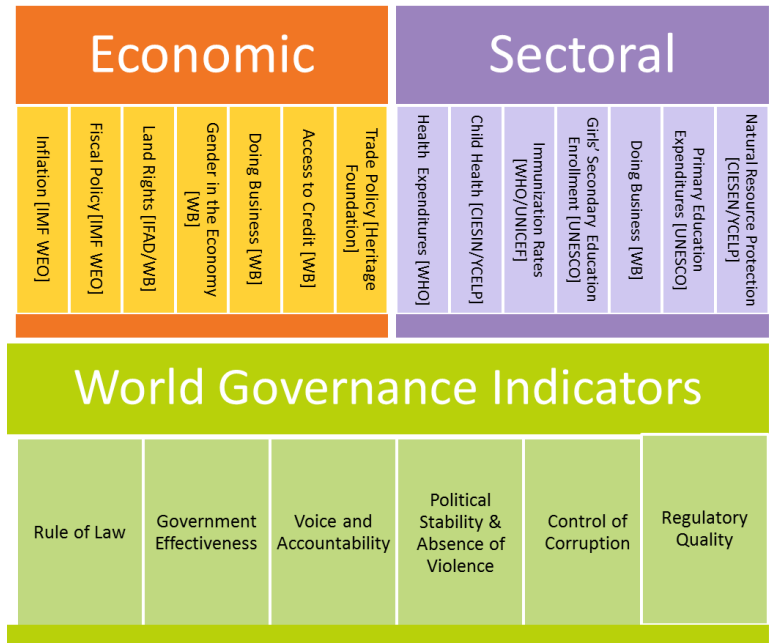


Layer 5: World Governance Indicators

World Governance Indicators include: Government Effectiveness, Rule of Law, Control of Corruption, Regulatory Quality, Voice and Accountability, Political Stability and Absence of Violence. All of these indicators are used by the Millennium Challenge Corporation (MCC) when considering country investment.

Layer 6: Governance Outcomes

There are many positive outcomes from good governance in economic growth and addressing social issues like health and education. The scope of these indicators has been reduced in the FreeBalance Governance Framework to those that have impact on donor funding decisions such as the World Bank Doing Business indicator. There are other measures such as Foreign Direct Investment (FDI) and macroeconomic country growth that are relevant.





About FreeBalance



FreeBalance is a For Profit Social Enterprise (FOPSE) software company that helps governments around the world to leverage robust Government Resource Planning (GRP)

technology to accelerate country growth. Proven FreeBalance GRP products and focused methodology supports financial reform and modernization to improve governance, transparency and accountability. Good governance is required to improve development results. FreeBalance ensures high success rates for governments under stress to those in the G8 and enables governments to improve performance and comply with government goals. Unlike other Commercial Off-the-Shelf (COTS) vendors, FreeBalance is socially responsible as core, customer-centric and focused 100% on government.

The FreeBalance Accountability Suite is a comprehensive fully web-based Government Resource Planning software suite that supports the entire budget cycle and strengthens governance by improving budget transparency, fiscal control and predictability. The proven Suite integrates transactions with content and collaboration through innovative Government 2.0 technology and links budget controls with objectives to enable governments to improve performance, transparency and comply with government goals. The FreeBalance Accountability Suite is proven in government implementations around the world, programmed for government and progressively activated to adapt to current and changing government context.

FreeBalance i^3+qM is an integrated product development, implementation and sustainability services methodology designed for Government Resource Planning to ensure long term implementation success.

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