Public Service

PRODUCTIVITY MANAGEMENT

Framework

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For information on the Public Service Productivity Management Framework, please contact the Directorate: Productivity & Efficiency Studies.

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Executive Summary

Productivity is regarded as a key success factor for public service organisations. This is affirmed by chapter 10 of the South African constitution (1996), and chapter 1 of the Public Service Act (1994). In support of these legislative provisions, the Department of Public Service and Administration (DPSA) has developed a Public Service Productivity Management Framework for the measurement and management of public service productivity (PSP).

Emerging from extensive consultative processes within and outside government, this Framework represents a holistic, evidence-based approach to understanding and defining; measuring; and managing public service productivity. This Framework is critical considering the multiplicity of benefits that can be derived from improved public service organisational productivity. These include general benefits such as growth in the economy and improvements in the living standards of citizens, as well as specific benefits for different sections of society. These are as follows:

- **Citizens** benefit from increased public service productivity when goods and services are available to them in the desired quantity and quality (and at the right time and place);
- **Employees** (public officials) benefit from increased productivity through an improved and ergonomically functional working environment and increased job satisfaction (i.e. employee wellness improvements);
- **Organisations** in the public administration system benefit from increased productivity in that public resources (inputs) are used more efficiently and effectively to achieve stated goals;
- **Communities** benefit through improved service delivery which leads to greater social and economic stability – i.e. the creation of “a better life for all”.

To ensure the relevance and appropriateness of the productivity measurement approach adopted in the Framework, the DPSA has undertaken five productivity assessments in the departments of health (North West province); basic education (Mpumalanga province); social development (Limpopo province), cooperative governance, human settlement and traditional affairs (Limpopo province); and the national department of rural development and land reform. These assessments were documented as case studies with the intention of facilitating the implementation of the PSP measurement instrument throughout the health; basic education; human settlements, social development; and rural development and land reform sectors, as well as the South African public service at large.
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I. Introduction

Productivity is regarded as a key success factor for organisations in both the public and private sector. Traditionally defined as outputs divided by inputs, productivity has – in the context of the public service – become an important measure of how effectively and efficiently inputs (labour, finances, materials, and infrastructure) are being translated into high quality outputs (goods and services).

Achieving a high degree of productivity is an important objective of public service organisations across the world given that it is under increasing economic and political pressure to deliver a selected/mandated set of goods and services within the limits of ever-increasing resource constraints. The South African public service is no exception to this global phenomenon.

Hence, the development and implementation of a framework for the measurement and management of public service productivity (PSP) that aims to improve PSP is critical. This document, the PSP Management Framework, is a direct response to this need. It represents a holistic, evidence-based approach to understanding and defining; measuring; and managing public service productivity.

The content of this Framework is informed by Chapter 10 of the South African Constitution (1996) that calls on public administration to be “development-orientated”, “accountable”, and governed in a manner that promotes the “efficient, economic and effective use of resources” (section 195). Also, Chapter 1 of the Public Service Act (1994) calls on the Minister for Public Service and Administration to put in place “mechanisms for the efficient and effective delivery of public services”. With this efficiency, effectiveness, and developmental orientation in mind, government introduced a ‘Batho Pele’ (People First) programme in 2001 with the following specific objectives in mind:

- To operationalise a “developmental” approach to public service delivery that puts people at the centre of service delivery planning and implementation processes;
- To improve the face of service delivery by fostering new attitudes such as increased commitment to citizen consultation, courtesy and dedication;
- To improve the image of the public service that is generally perceived to operate according to “an outdated rules-based culture that is citizen-unfriendly, inefficient, and ineffective”.

2 Effectiveness is the extent to which citizen requirements are met, while efficiency is the measure of how the organisation’s resources have been used in providing citizen satisfaction (Neely, 1998).
3 Levine R. (2004), Service Delivery Review, 3(2). Department of Public Service and Administration, Pretoria.
The Framework is also informed by a literature review on public service productivity management and measurement internationally (Jääskeläinen & Lönnqvist, 2011)\(^4\) and locally (Productivity SA, 2007)\(^5\); as well as a series of initial consultative workshops with national and provincial government departments in the health, basic education and human settlements sectors.

At an operational level, the aim of this Framework is to contribute towards the improvement of Public Service Productivity at the organisational level in order to (a) strengthen public accountability, and (b) enhance organisational efficiency and effectiveness.

It is not the intention of this Framework to give guidance on the measurement of public service productivity at the macro-level (i.e. the whole public service); nor at the micro-level (i.e. at level of a hospital, school, or procurement unit). The focus is solely on the meso-level, referring to provincial and national departments.

The practice and theory of productivity stress that public service productivity is understood and defined in different ways depending on the context. And these varying interpretations of the concept have understandably lead to conceptual uncertainties and an array of methods of measuring public services productivity, all of which points to deficiencies in the availability of standardised, reliable, and comparable data. Cognisant of these contextual matters, this Framework thus seeks to:

(a) promote a common understanding and definition of public service productivity based on the contextual realities of the South African public service;

(b) encourage the develop and implementation of a standardised methodology for measuring public service productivity that takes into account existing data challenges; and

(c) identify and recommend public management practices that can lead to improved public service productivity.

The afore-mentioned objectives will be achieved by focusing on research and advocacy, capacity development for productivity self-assessment, and regular reporting on productivity improvements and trends. The activities related to these focus areas include:

- Continuous consultation with stakeholders regarding the refinement of the Framework and strategies to improve public service productivity;

- Competency development of officials responsible for organisational productivity assessments;


- Conducting annual productivity assessments and trends analysis;
- Quality control of assessments;
- Providing recommendations for productivity improvements based on assessments and best practices.

These activities can only be realised with institutional support from public service departments in the form of collaborative partnerships between the DPSA and stakeholder departments, effective coordination regarding the implementation and submission of productivity assessments, and commitments to gather and manage organisational data that is standardised, reliable, and comparable across departments.
In its entirety, the PSP Management Framework presents a consensus-based definition of PSP which emerged from a consultative process with government stakeholders; a PSP measurement or assessment tool that was developed based on a review of international and local good practices and subsequently piloted in a number of provincial departments; and an action plan template for managing identified organisational productivity improvement interventions.

II. Problem Statement

Despite the acknowledged importance of increased PSP in contributing to the development of the economy and addressing the basic needs of citizens⁶, much of the focus in the post-1994 South African public service has been on service delivery performance of departments and employees, and not organisational productivity. Whereas performance is directed at measuring outputs achieved by organisations and employees, productivity goes an important step further by also measuring the organisational resources (inputs) used to achieve outputs, ensuring that the relationship between these and efficiency/effectiveness is understood and optimally managed.

For example, performance management systems in public service departments often result in rewarding officials for their perceived levels of performance whilst the departments in which these officials are located are subject to criticism for under-spending, erratic service delivery, and poor adherence to the Batho Pele principles⁷. This is problematic. A focus on organisational productivity that links the service delivery performance of departments and employees with other input and output measures could ensure a better grasp of actual employee performance linked to overall organisational performance.

Furthermore, finding relevant and reliable public service productivity measurement tools and measures that can reasonably be applied to the South African public service has proven to be challenging for a variety of reasons (see, for example, Grönroos & Ojasalo, 2004, and Jääskeläinen, 2009)⁸. One of these documented challenges relate to the complexity of public service outputs and specifically the intangible nature of most public services⁹. Examples of intangible factors impacting of public services

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⁶ See Address by Deputy President Kgalema Motlanthe at the Government Leadership Summit, 03 April 2013.
are: (1) service image (as perceived by the service user), (2) contact/frontline staff image (as perceived by the service user), (3) atmosphere in service provision (as experienced by officials and the service user) and (4) the level of user/customer/citizen satisfaction. Despite a hypothetical awareness of these intangible factors, there has been little progress in our understanding of how to capture these features in order to design concrete public service productivity tools and measures\(^{10}\).

The absence of appropriate PSP measurement tools and measures has contributed directly to a general neglect of public service productivity management as a focal area within the broader organisational science discipline of the public service. This can, in part, be attributed to the historical application of traditional workstudy techniques prior to democratisation in South Africa.

The Taylorist\(^{11}\) and Fordist\(^{12}\) orientation of the pre-1994 bureaucracy was brought into the post-1994 bureaucracy wholesale despite its narrow understanding of productivity and work measurement techniques. These orientations were inappropriate as it was deeply rooted in a context of mass production within a manufacturing environment more applicable to production line functions of the private sector, with little relevance to the demands of the transformed South African public service.

However, after 1999, the New Public Management (NPM) paradigm started to dominate the public administration reform agenda of South Africa and OECD countries globally\(^{13}\), directly influencing the notion that private sector style ‘managerialism’ within a decentralised decision-making framework was the answer to transforming organisational bureaucracies into more efficient, flexible, flatter organisational structures staffed by self-directed, cross-functional, highly skilled technocrats and knowledge workers supported by the use of information technology\(^{14}\).

The ‘managerialism’ of NPM (which redefined the ‘citizen’ as the ‘customer’) failed to translate into any significant systemic efficiency gains or increased productivity, but rather contributed to job dilution and the creation of a larger number of management positions at the expense of the creation of lower level operational posts to drive service delivery and thus productivity. In the case of the South African Public

\(^{10}\) Jääskeläinen & Lönnqvist, 2011; Jääskeläinen, 2009.

\(^{11}\) F. W. Taylor was an American mechanical engineer who sought to improve industrial efficiency. He is regarded as the father of scientific management and was one of the first management consultants.

\(^{12}\) Fordism, named after Henry Ford, is a notion of a modern economic and social system based on an industrialised and standardised form of mass production. The concept is used in various social theories and management studies about production and related socio-economic phenomena.


Service, this translated into lower level work now being performed by higher graded and paid Senior Management Service (SMS) positions, which has resulted in institutionalised inefficiencies and reduced productivity.

Faced with the afore-mentioned problematic and the challenges of growing economic pressure on the State fiscus, the inappropriateness of global administrative reform agendas, and a growing South African population characterised by a high degree of income inequality, South Africa needs an overarching Framework with guidelines on how PSP should be understood, defined, measured and managed. This Public Service Productivity Management Framework provides such guidelines informed by evidence-based practices within the South African public service.\(^\text{15}\)

### III. Rationale for a Productivity Management Framework

The raison d’être for a Public Service Productivity Management Framework is driven by three considerations, namely\(^\text{16}\): (a) the Public Service is a major employer – especially of ‘white-collar’ employees whose output is mostly intangible; (b) the Public Service is a major provider of services in the economy, particularly business services (affecting the cost of inputs), and social services (affecting labour quality); and (c) the Public Service is a major consumer of tax resources. Changes in public service productivity therefore have significant implications for the economy and the well-being of all citizens. This despite, the only recorded attempt to conduct a productivity measurement study in the South African public services was a 2007 study by Productivity SA\(^\text{17}\), which focused on the public health sector. Key shortcomings of this study were that it did not exhaustively explore the multi-factors that impact on PSP nor did it propose any possible appropriate models for the measurement of PSP in the South African context. The need for a generic PSP Management, with due consideration of all the factors impacting on productivity, is thus apparent.

An overarching PSP Management Framework for the South African public service is also critical considering the multiplicity of benefits that can be derived from improving public service organisational productivity. These include general benefits such as growth in the economy\(^\text{18}\), improvements in living standards\(^\text{19}\), as well as specific benefits for different sections of society. These are as follows:

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\(^{16}\) Thornhill (2006).


\(^{18}\) Thornhill (2006).

Citizens benefit from increased PSP when goods and services are available to them in the desired quantity and quality (and at the right time and place);

Employees (public officials) benefit from increased productivity through an improved and ergonomically functional working environment and increased personal and job satisfaction (i.e. employee wellness improvements);

Organisations in the public service benefit from increased productivity in that public resources (inputs) are used more efficiently and effectively to achieve stated goals;

Communities benefit through improved service delivery which leads to greater social and economic stability – i.e. the creation of ”a better life for all”.

At a higher-order level however, a PSP Management Framework that aims to improve PSP is critical as it enhances (a) public accountability, and (b) efficiency and effectiveness in public service delivery.

(a) Public Service Accountability

The South African Constitution, which is the supreme law of the Republic, states that public administration must be accountable (Chapter 10). In terms of Public Administration, this requirement encompasses different types of administrative accountability, namely:

- traditional accountability (which refers to compliance with legislation, regulations, policies, strategies, and political executive directive taking into consideration both the vertical and horizontal dimensions of accountability);
- managerial accountability (which concerns itself with matters of performance and more specifically the economical and efficient use of public resources in order to avoid waste and unnecessary expenditure);
- programme accountability (which concerns itself with ensuring that assigned programmes are effectively achieved with due consideration for quality and value for money); and
- process accountability (which concerns itself with the procedures and methods selected to convert public inputs to outputs and outcomes with due consideration to fairness, equity, efficiency and effectiveness).

This PSP Management Framework is vital to the practical manifestation of public accountability given that productivity measurement is an important means by which administrative accountability can be

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20 Vertical accountability refers to accountability to political or administrative superiors, and horizontal accountability refers to accountability to the public administration as a whole, including the citizen as a rights-bearer and user of services.
established. Other means could include performance audits, programme evaluations, cost-benefit analyses, as well as an analysis of the economic and social impact of programmes.

(b) Efficiency and Effectiveness in Service Delivery

Public service productivity (PSP) is an important measure of how effectively and efficiently public inputs (human labour, finances, and infrastructure) are being translated into high quality outputs (public goods and services) for the benefit of a fast-growing citizenry. Yet despite the acknowledged importance of productivity in the public service domain, there is no common understanding or standardised measure of PSP in South Africa. This Framework addresses this particular gap.

IV. Defining Public Service Productivity

Productivity is traditionally defined as the ratio between output (e.g. the quantity/amount of products or services produced) and input (resources) (see Box 1). Following this understanding, an employee or organisation is considered highly productive where the outputs exceed the inputs.

Box 1: Traditional Productivity Formula

\[
\text{Productivity} = \frac{\text{Output (Amount of goods \& services)}}{\text{Input (Labour, Capital)}}
\]

In the public service, however, the concept is highly contested. Because productivity was consistently defined as the ratio of outputs divided by inputs, conventional wisdom held that calculating public service productivity should always yield a value of ‘one’: outputs/inputs = inputs/inputs = 1. It is this ‘output=input’ approach (based on the assumption that output is equivalent to the input) which gave rise to the notion that there have been no meaningful productivity increases in the public service, even over the long term.

This unscientific view has however changed to the extent that productivity has become an important measure of how effectively and efficiently inputs (of Capital and Labour) are being translated into goods and services outputs for the benefit of the society, economy and environment. Achieving a high level of productivity (usually through fewer inputs or increased output) is now considered an important objective for the modern-day public service.
One important lesson learnt over time is that productivity is not a ‘one-size-fits-all’ concept. Pritchard (1992: 455)\textsuperscript{21} defines productivity as “…how well a system uses its resources to achieve its goals”. With this definition, productivity is seen as a combination of efficiency and effectiveness; or:

\[ \text{Productivity} = \text{Efficiency} + \text{Effectiveness} \]

On the other hand, when citizens – as the direct beneficiaries of public goods and services – talk about public service productivity, they do not necessarily concern themselves with technical efficiency and effectiveness, or the relationship between output and input. Citizens in general, are more concerned about the \textit{outcomes achieved}\textsuperscript{22} by public service organisations and the \textit{value they receive} from public services. Service “\textit{quality}” is thus a core part of citizen conversations about public service productivity, even when it cannot be captured accurately by most productivity metrics. Public managers therefore have to adopt a broad approach to the concept of productivity that includes all factors that could possibly influence PSP, including citizen satisfaction, employee satisfaction, and the cost of labour and other inputs required for the efficient and effective delivery of public goods and services.

Because of the difficulties related to conceptual clarity about public service productivity (PSP), this Framework adopted a consensus-based understanding and definition of PSP with a bias towards the citizen or end-user of public goods and services:

\textit{Public Service Productivity is about the creation of citizen satisfaction through the generation and application of public service-based knowledge and skills to produce quality, durable products and provide quality services which are accessible to all and that meet the needs and standards of the citizens and are consistent with their social, environmental and economic goals.}

Stated differently, PSP entails the \textit{optimal deployment} of public resources (inputs) to address the needs of citizens through the provisioning of quality public goods and services (output) aimed at enhancing their livelihoods in a sustainable manner (outcome)\textsuperscript{23}.

Furthermore, PSP is a \textit{relative concept}: it cannot be said to increase or decrease unless a \textit{comparison} is made, either of variations from a standard at a certain point in time (which can be based on, for example, another department) or of changes over time\textsuperscript{24}.

\begin{flushleft}
\textsuperscript{22} E.g. changes in health rather than the number of patients treated; and changes in educational status rather than the number of lessons taught.
\textsuperscript{23} See Jääskeläinen & Lönnqvist, 2011; and McAdam, Reid and Saulters, 2002.
\end{flushleft}
V. Measuring Public Service Productivity: The Matrix Approach

Measurement of public service productivity is challenging as it is impeded by conceptual uncertainties and data gaps. Despite these complexities, productivity measurement in the public service is possible if these challenges are mitigated by advancing a uniform understanding of the concept and a consistent gathering of relevant, reliable data.

An organisational productivity measurement or assessment tool should meet certain criteria in order to gain acceptance by organisational employees and citizens. Other than being objectively valid (suitable to the context), it must also be perceived to be valid by organisational employees and citizens25. The productivity measurement/assessment tool should also comply with the following criteria: (a) easy to understand; (b) useful at the operational level; (c) take into account the multiplicity of mutually interacting factors impacting on productivity; (d) identify and measure those factors that can be affected by managerial interventions; and (e) allow for comparisons between organisations/departments providing similar services26.

After testing a range of productivity measurement approaches in a public service context – including monetary measurements (see Gronos & Ojaalo, 2004); output index methods (see Rosen, 1993); scorecards (see Kaplan & Norten, 1992); and the matrix method (see Riggs, 1986) – Jääskeläinen (2009) concluded that the matrix approach to measuring public sector productivity represents the most relevant, appropriate and easy to understand approach to public service productivity management27.

The matrix method regards quantity and quality dimensions as critical in measuring public service productivity28. Hence, there has to be data on the factors affecting both these dimensions in order to concretely measure PSP (see Box 2).

Generic factors impacting on the quality and quantity dimensions of public goods and services (output) were identified through a consultative process with national and provincial government departments,

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28 Until recently, public sector productivity has been assumed to be zero in the national accounts. The output of the public sector has been measured as equal in value to the total value of inputs. This output = input convention has increasingly come under scrutiny in recent years (see Linna, et.al., 2010).
and these multiplicity of factors were clustered into three core factors, namely Labour productivity, Operational productivity, and Performance productivity.

(a) Quantity Dimension

It is important to have sufficient resources (human and financial) to match the demand for a particular public service according to pre-determined citizen segmentation\(^{29}\). However, apart from resource availability, the quantity of a particular service provided is also affected by the following individual factors: (i) the demand frequency for a particular service (whether daily or occasional); (ii) the capacity of the facility in a defined catchment area; (iii) the competencies of the public servants (capability, attitude, skill) servicing that area, and; (iv) the operations management systems in place to deliver the service. As illustrated in the Lizrl-model model in Box 2, these individual factors impact on the quantity dimension of PSP.

(b) Quality Dimension

Service quality, another key dimension of public service productivity, is impacted on by several individual factors (see Box 2). Quality measures for public services include both tangible and intangible

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\(^{29}\) Citizen segmentation is the profile of all citizens in a demarcated area who may need a particular government service from a specific department which depicts all contextual factors which must be responded to, taking cognizance of the cost-benefit-analysis in where and how services can be easily accessed by such citizens.
elements, of which the Servqual-model and its dimensions is the most general: reliability, tangibility, responsiveness, empathy and assurance.\footnote{Fernando A & J. Sanchez (2011). 
Towards a measurement of the public services productivity: a practitioner’s guide. Universidad Sergio Arboleda.}

Other factors related to service quality would, for example, include consultation with citizens, queue management systems in place; process flow and ergonomics; access norms for where services are located and can be accessed using walk-speed and drive-speed; and the application of the Public Service Operations Management Framework that includes the following building blocks:

- a service delivery model that gives certainty about how services will be provided;
- clearly mapped and managed business processes;
- documented standard operating procedures (SOPs);
- unit costing done for services;
- acceptable service standards;
- an agreed service charter; and
- continuous planning for service delivery improvement

Data on the aforementioned factors impacting on public service quality should be available in order to determine its impact on PSP.

(c) The Matrix Approach to Measuring Public Service Productivity

The multiplicity of factors impacting on the quality and quantity dimensions of public services (and thus PSP) can be clustered into three core factors, namely:

- Labour
- Operational
- Performance

These core factors are described in Box 3 and their measures (indicators) listed.
Box 3: Core factors of the Matrix Approach to Measuring PSP

<table>
<thead>
<tr>
<th>Generic factors impacting on the quality and quantity dimensions of PSP</th>
<th>Core factor</th>
<th>Description of Core factor</th>
<th>Indicators (Required Data)</th>
</tr>
</thead>
</table>
| Service demand/need | Labour (20%) | Labour is usually assumed to be the most important input for the delivery of public goods and services. Labour productivity have indicators which assess the cost of labour, working days of labour force, days lost due to a variety of reasons, and vacancy rates. | • Score achieved for ratio of salary cost to total budget  
• Score achieved for number of days absent due to various reasons (Absenteism rate)  
• Training of Staff (Skills Programmes)  
• Organisational vacancy rate |
| Resource availability (human and financial) | | | |
| Capacity of facility/current output quantity | | | |
| Employee competence, capability, and morale | Operational (40%) | Operational productivity measures include established organisational decision-making and implementation structures (governance), systems, processes, and procedures. It also includes measures towards the optimisation of service delivery through critical path analysis ("business process mapping"), availability of standard operating procedures for job tasks, enforcement of approved service delivery standards, citizen feedback on service delivery implementation, use of appropriate technology (including ICT), and implementation of behavioural change management programmes aimed at improving the service delivery experience like the "Batho Pele" programme. | • Score achieved in implementing sector-specific norms and standards  
• Score achieved in implementing Operations Management Framework building blocks: service delivery model, business process mapping, standard operating procedures, service standards and charter, service delivery improvement plans.  
• Score achieved for workspace design (ergonomics)  
• Score achieved for citizen feedback on service delivery performance  
• Score achieved on employee and citizen feedback on the implementation of the Batho Pele standards. |
| Physical working environment | | | |
| Operations Management Systems, Processes, and Procedures | | | |
| Citizen consultation | | | |
| Citizen expectations (quality, quantity, reliability, care & compassion, value for money) | | | |
| Objective service norms and standards | Performance (40%) | Performance productivity refers personnel performance in relation to set targets in a set time. It also includes measures that directly impacts on personnel performance like the leadership and management environment, and personnel morale that can be determined through regular organisational climate surveys. | • Total performance rewards to employees.  
• Number of employees that underwent counselling and support due to work-related stress.  
• Number of employees that were disciplined for various reasons  
• Score achieved for employee satisfaction survey (to include self-assessment on presenteeism). |
The assessment table for the matrix approach is outlined in Box 4, with the organisational “Level-achieved” Score Convertor below:

**Box 4: Assessment Table for the Matrix Approach**

<table>
<thead>
<tr>
<th>Core Factor</th>
<th>Weight</th>
<th>Measure/Indicator</th>
<th>Highest Achievement</th>
<th>Lowest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labour (20%)</td>
<td>5%</td>
<td>Ratio of salary cost to total budget</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5%</td>
<td>Days absent</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5%</td>
<td>Training of Staff (Skills Programmes)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5%</td>
<td>Vacancy rate</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Core Factor</th>
<th>Weight</th>
<th>Measure/Indicator</th>
<th>Highest Achievement</th>
<th>Lowest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operations (40%)</td>
<td>10%</td>
<td>% score in implementing Operations Management Framework</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>10%</td>
<td>Workplace design (ergonomics and workflow)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>20%</td>
<td>% score in citizen and employee feedback on implementation of Batho Pele standards</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Core Factor</th>
<th>Weight</th>
<th>Measure/Indicator</th>
<th>Highest Achievement</th>
<th>Lowest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance (40%)</td>
<td>10%</td>
<td>Total performance rewards to employees</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5%</td>
<td>Number of employees on counselling and support due to work-related stress</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5%</td>
<td>Number of employees disciplined</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>10%</td>
<td>Employee satisfaction score</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>10%</td>
<td>Budgetary Performance</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**“Level-Achieved” Score Convertor:**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Scale</th>
<th>1 (Highest)</th>
<th>2</th>
<th>3</th>
<th>4 (Lowest)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vacancy rate</td>
<td>≥4%</td>
<td>≥8%</td>
<td>≥10%</td>
<td>≤11</td>
<td></td>
</tr>
<tr>
<td>Sick Leave</td>
<td>≥12</td>
<td>≥14</td>
<td>≥16</td>
<td>≤18</td>
<td></td>
</tr>
<tr>
<td>Annual Leave</td>
<td>&gt;22</td>
<td>23-27</td>
<td>28-31</td>
<td>≤32</td>
<td></td>
</tr>
<tr>
<td>Discipline Management</td>
<td>≥1%</td>
<td>≥5%</td>
<td>≥9%</td>
<td>≤10%</td>
<td></td>
</tr>
<tr>
<td>Operations Management</td>
<td>7/7</td>
<td>5/7</td>
<td>3/7</td>
<td>0/7</td>
<td></td>
</tr>
<tr>
<td>Employee Assistance Programme (EAP) or Counselling and Support</td>
<td>≥2%</td>
<td>≥3%</td>
<td>≥4%</td>
<td>≤5%</td>
<td></td>
</tr>
<tr>
<td>Performance Rewards to staff</td>
<td>≤50%</td>
<td>40-49%</td>
<td>39-30%</td>
<td>≥30%</td>
<td></td>
</tr>
<tr>
<td>Citizen Satisfaction</td>
<td>≤95%</td>
<td>90-94%</td>
<td>85-89%</td>
<td>≥84%</td>
<td></td>
</tr>
<tr>
<td>Employee Satisfaction</td>
<td>≤71%</td>
<td>61-70%</td>
<td>50-60%</td>
<td>≥49%</td>
<td></td>
</tr>
<tr>
<td>Budgetary Performance</td>
<td>≤95%</td>
<td>90-94%</td>
<td>85-89%</td>
<td>≥84%</td>
<td></td>
</tr>
<tr>
<td>Training/Skills Development</td>
<td>≤31%</td>
<td>21-30%</td>
<td>20-11%</td>
<td>≥10%</td>
<td></td>
</tr>
<tr>
<td>Personnel to Total Expenditure</td>
<td>≥60/40</td>
<td>61-64</td>
<td>65-68</td>
<td>≤69</td>
<td></td>
</tr>
</tbody>
</table>
(i) Calculation of Productivity Scores

The following three steps should be followed to quantify the results of the productivity matrix:

**Step 1: Determine the weighting for each productivity core factor (100% in total).**

Not all productivity factors are of equal value to an organisation; weightings should be assigned to core factors in proportion to their importance. This will vary for different organisations. However, for the South African Public Service, productivity will be weighed against the following three core factors.

<table>
<thead>
<tr>
<th>Core factor</th>
<th>Weighting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labour</td>
<td>20% (200 points)</td>
</tr>
<tr>
<td>Operational</td>
<td>40% (400 points)</td>
</tr>
<tr>
<td>Performance</td>
<td>40% (400 points)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100% (1000 nominal points)</strong></td>
</tr>
</tbody>
</table>

**Step 2: Determine the scores for each productivity indicator.**

Once the weighting for each productivity core factor is determined as above, the scores for each indicator should be established. Since both the weighting and the level achieved for each indicator may vary, scores for each indicator should be determined as follows:

\[
\text{Individual Indicator Score } (\alpha) = \frac{\text{Indicator Weight} \times 10 (\beta)}{\text{Level Achieved} (\delta)}
\]

E.g. assuming a department achieved highest scores (1) for all indicators but it scored only 50% on the implementation of the Operations Management Framework (i.e. a score of 3); the achieved score for the indicator would be 27, calculated as follows: \( \alpha = \frac{\beta}{\delta} \) \( \Rightarrow \{ 27 = \frac{80}{3} \} \)

**Determining Scores for Indicators:** For ease of measurement, a total score of 1 000 points is used.

<table>
<thead>
<tr>
<th>Sub-factor</th>
<th>Weighting</th>
<th>Total Score For Each Indicator</th>
<th>Level Achieved</th>
<th>Score for Each Productivity Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>itative Cost to Total Budget</td>
<td>5%</td>
<td>50</td>
<td>1</td>
<td>50</td>
</tr>
<tr>
<td>Days absent</td>
<td>5%</td>
<td>50</td>
<td>1</td>
<td>50</td>
</tr>
<tr>
<td>Supervisor: Employee ratio</td>
<td>5%</td>
<td>50</td>
<td>1</td>
<td>50</td>
</tr>
<tr>
<td>Training of Staff (Skills Programmes)</td>
<td>5%</td>
<td>50</td>
<td>1</td>
<td>50</td>
</tr>
</tbody>
</table>
### Operational (40%) (347)

<table>
<thead>
<tr>
<th>% score in implementing Operations Management Framework</th>
<th>10%</th>
<th>80</th>
<th>3</th>
<th>27</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workplace design (ergonomics and work flow)</td>
<td>10%</td>
<td>80</td>
<td>1</td>
<td>80</td>
</tr>
<tr>
<td>% score in citizen and employee feedback on implementation of Batho Pele standards</td>
<td>20%</td>
<td>80</td>
<td>1</td>
<td>80</td>
</tr>
</tbody>
</table>

### Performance (40%) (400)

<table>
<thead>
<tr>
<th>% score</th>
<th>10%</th>
<th>200</th>
<th>1</th>
<th>200</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total performance rewards to employees</td>
<td>10%</td>
<td>50</td>
<td>1</td>
<td>50</td>
</tr>
<tr>
<td>Number of employees on counselling and support</td>
<td>5%</td>
<td>50</td>
<td>1</td>
<td>50</td>
</tr>
<tr>
<td>Number of employees disciplined</td>
<td>5%</td>
<td>100</td>
<td>1</td>
<td>100</td>
</tr>
<tr>
<td>Employee satisfaction score</td>
<td>10%</td>
<td>100</td>
<td>1</td>
<td>100</td>
</tr>
<tr>
<td>Budgetary Performance</td>
<td>10%</td>
<td>100</td>
<td>1</td>
<td>100</td>
</tr>
</tbody>
</table>

Total 100% 1 000* 947

---

**Step 3: Determine the range for total productivity achieved.**

Use a simple 4-tier system to allocate total organisational productivity scores.

<table>
<thead>
<tr>
<th>LEVEL OF PRODUCTIVITY</th>
<th>RANGE OF SCORES</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Productivity</td>
<td>801 to 1 000</td>
<td>81-100%</td>
</tr>
<tr>
<td>Moderate Productivity</td>
<td>601 to 800</td>
<td>61-80%</td>
</tr>
<tr>
<td>Average Productivity</td>
<td>401 to 600</td>
<td>41-60%</td>
</tr>
<tr>
<td>Low Productivity</td>
<td>0 to 400</td>
<td>0-40%</td>
</tr>
</tbody>
</table>

(d) Interpretation of Matrix Approach Scores

The matrix approach to measuring organisational productivity presents a multi-dimensional assessment of the productivity of public service providing organisations/departments. It is therefore unlikely that a single organisation/department can have a good score on every measure/indicator. Also, the scores from organisations providing similar services (and using similar matrices) would vary because of the differences between those organisations/departments.
In order to compare the total score of a productivity matrix, the same scales, weights and measures have to be used. Therefore, the total score of the matrix is comparable only when the same matrix is used. In the case of similar organisations using similar matrices the score provides a good basis for benchmarking. The flexibility of the approach enables the updating of the matrix whenever it is deemed necessary. However, in order to sustain the comparability of the results from various years the same matrix should be used for a longer time period.

(e) Assumptions of the Matrix Approach

<table>
<thead>
<tr>
<th>Assumptions</th>
<th>If false, recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The environment (political, economic, technological, legal, cultural) is conducive, and there are systems and processes in place that enable and support officials to harness and optimise the use of resources (inputs) at their disposal.</td>
<td>The creation of a conducive environment including measures to fill vacancies, improve infrastructure quality, and the implementation of set norms and standards for operational efficiency and effectiveness.</td>
</tr>
<tr>
<td>2. Productivity is essentially a management concept with a strong internal focus, implying that productivity can be improved by better management (effective output delivery, efficient resources utilisation).</td>
<td></td>
</tr>
<tr>
<td>3. The emphasis is largely on people (officials and citizens). The matrix approach thus assumes that internal staff is available (vacancies are filed) and that there is active citizen participation. The model also assumes the availability of infrastructure (equipment and work space), appropriate systems and processes (operations management framework and performance management systems, etc.).</td>
<td></td>
</tr>
</tbody>
</table>

VI. Managing Public Service Productivity

The use of the matrix approach to measuring organisational productivity enables managers to identify the ‘weak links’ in the Labour, Operations, and Performance core factors of the organisation. Through managerial interventions, these ‘weak links’ should be addressed. It is thus suggested that after completing the productivity measurement/assessment exercise, a brief action plan (see Box 6) should be developed to address these ‘weak links’ and improve total organisational productivity.

Box 6: Simple Organisational Action Plan

<table>
<thead>
<tr>
<th>Actions</th>
<th>Person or Unit Responsible</th>
<th>Timeframe</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
VI. References


