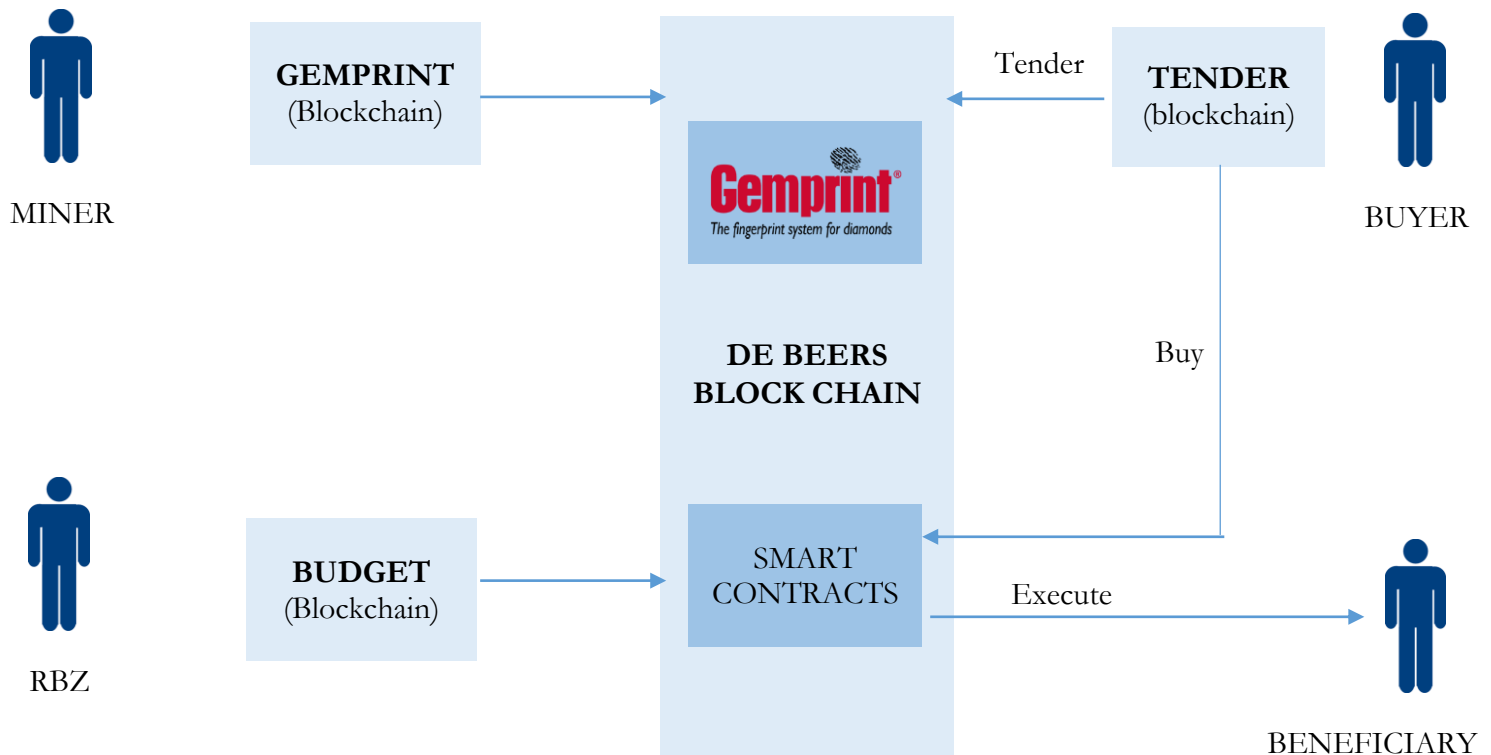


GREAT DYKE DE BEERS BLOCKCHAIN



A Blockchain that attracts International Diamond Buyers

Blockchain technology enables reliable records to be kept of all work and approval steps in the process of procurement, contracting, managing tenders and disbursing funds when implementing a project. With the aim of making the use of public funds transparent and verifiable, Germany's KfW Development Bank teamed up with the KfW Digital Office to develop the TruBudget (Trusted Budget Expenditure Regime) software application which is based on this innovative technology. All of the parties involved can collaborate on this platform and track who made what changes. The blockchain technology not only enables greater transparency, even more importantly, it prevents retroactive or unauthorised changes. This minimises the risk that funds are misused by the institutions that receive the disbursements.

"One of the biggest obstacles to economic development is the mismanagement of public funding. It also jeopardises the effectiveness of Financial Cooperation on a regular basis. KfW's TruBudget is an innovative digital application from which other development banks can also benefit. This software makes Germany a global pioneer in the use of digital solutions to alleviate poverty," said Dr Norbert Kloppenburg, member of the Executive Board of KfW Group.

The funds in public budgets in developing countries are at risk of being misappropriated, instead of being used to benefit the common good (e.g. for hospitals and schools). International donors respond to these risks and the weak implementation capacity in the partner countries by setting up parallel structures. But the associated transaction costs of this strategy are very high for both sides. Moreover, by circumventing the systems of the partner institutions in the respective developing or emerging countries, the donors also make it more difficult to achieve their aim of enabling the partner countries to plan and implement projects on their own.


In a EUR 1 million pilot phase financed by BMZ, the existing software prototype will first be tested with ongoing investment projects and undergo further development. KfW currently evaluates a pilot phase with several countries in Africa.

Appendix A – KfW Bank TruBudget Screen Shots


TruBudget

A blockchain-based solution for budget expenditure

Environment
Test ▾



Username






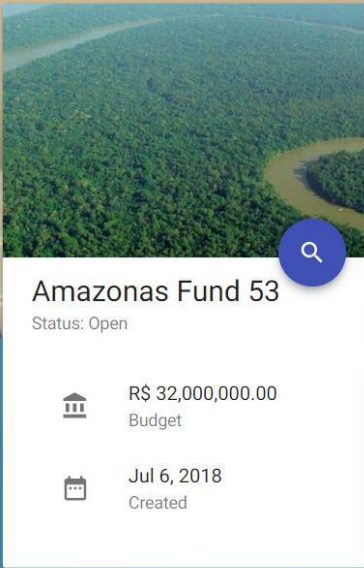
Password


English ▾

LOGIN

TRUBUDGET (TEST) MAIN > PROJECTS


KFW  1  






Amazonas Fund 53

Status: Open



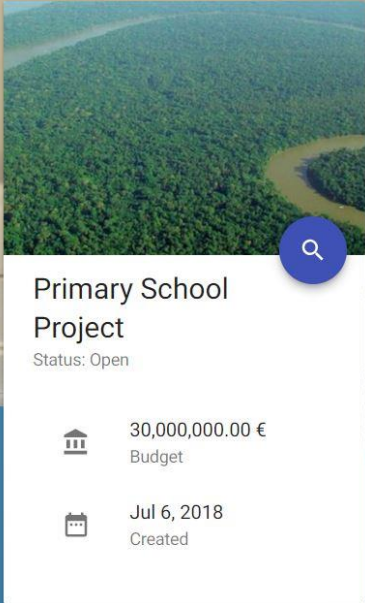
R\$ 32,000,000.00


Budget



Jul 6, 2018


Created






Primary School Project

Status: Open



30,000,000.00 €

Budget



Jul 6, 2018

Created

P

Primary School Project

Projects in 2018

30,000,000.00 €

Budget

—

Open

Status

Jul 6, 2018

Created

☒ John Doe

PERMISSIONS

Budget distribution

+

28,000,000.00 €

Assigned

93%

1 of 5 done

Completion

20%

Task status

Open

Done

4

1

—

✓

Open

Done

Sub-projects

Sub-project	Budget	Status	
Design studies	500,000.00 €	Done	SELECT

Workflow items

	Workflow	Budget	Assignee	Actions
✓	<div><div>i</div><div>Budget allocation</div></div>	N/A	<div><input checked="" type="checkbox"/> John Doe</div>	<div><div>🔒</div></div>
✓	<div><div>i</div><div>Tender publication</div></div>	N/A	<div><input checked="" type="checkbox"/> John Doe</div>	<div><div>🔒</div></div>
✓	<div><div>i</div><div>Tender evaluation</div></div>	N/A	<div><input checked="" type="checkbox"/> John Doe</div>	<div><div>🔒</div></div>
✓	<div><div>i</div><div>Contract signature</div></div>	500,000.00 € <div>Assigned</div>	<div><input checked="" type="checkbox"/> John Doe</div>	<div><div>🔒</div></div>
✓	<div><div>i</div><div>First installment</div></div>	N/A	<div><input checked="" type="checkbox"/> John Doe</div>	<div><div>🔒</div></div>
✓	<div><div>i</div><div>Progress report</div></div>	100,000.00 € <div>Disbursed</div>	<div><input checked="" type="checkbox"/> John Doe</div>	<div><div>🔒</div></div>
✓	<div><div>i</div><div>Payment interim installment</div></div>	100,000.00 € <div>Disbursed</div>	<div><input checked="" type="checkbox"/> John Doe</div>	<div><div>🔒</div></div>
✓	<div><div>i</div><div>Payment final installment</div></div>	300,000.00 € <div>Disbursed</div>	<div><input checked="" type="checkbox"/> John Doe</div>	<div><div>🔒</div></div>

Workflow items

	Workflow	Budget	Assignee	Actions
✓	<i>i</i> Budget allocation	N/A	✓ John Doe	🔒
✓	<i>i</i> Tender publication	N/A	✓ John Doe	🔒
–	<i>i</i> Tender evaluation	N/A	✓ John Doe	🔒 ✓
–	<i>i</i> Contract signature	1,500,000.00 € Assigned	✓ John Doe	🔒
–	<i>i</i> First installment	500,000.00 € Disbursed	✓ John Doe	🔒
–	<i>i</i> Payment interim installment	500,000.00 € Disbursed	✓ John Doe	🔒
–	<i>i</i> Progress report	N/A	✓ John Doe	🔒
–	<i>i</i> Payment final installment	500,000.00 € Disbursed	✓ John Doe	🔒

C

Construction lot 1
No description.

🏠

15,000,000.00 €
Budget

–

Open
Status

📅

Jul 6, 2018
Created

👤

✓ John Doe

PERMISSIONS

Budget distribution

+

15,000,000.00 €
Assigned

100%

–

0.00 €
Disbursed

0%

⌋

15,000,000.00 €
Projected

100%

Task status

Open Done

6

2

–

✓

Open

Done

Workflow items

	Workflow	Budget	Assignee	Actions
✓	<i>i</i> Budget allocation	N/A	✓ John Doe	🔒

De Beers Blockchain Delivery Schedule

Proposal – Ministry of Finance	15 Days	25 December
<ul style="list-style-type: none"> De Beers TRACR Blockchain 	15 Days	David
<ul style="list-style-type: none"> KfW Bank - TruBudget 	15 Days	Beauty
<ul style="list-style-type: none"> Surveillance Technology 	15 Days	Rayner
Computer Simulation [GemPrint API + Blockchain + Tender + Contracts]	21 Days	31 December
Great Dyke Website [www.2045.com]	21 Days	31 December
Great Dyke Company + PRAZ Registration + VAT Clearance	21 Days	31 December
KfW Bank – TruBudget Proposal Submission + Communication	10 days	2 – 15 January
De Beers Proposal Submission+ Communication	10 days	2 – 15 January
Zimbabwe Ministry of Finance Proposal Submission + Communication		11 January