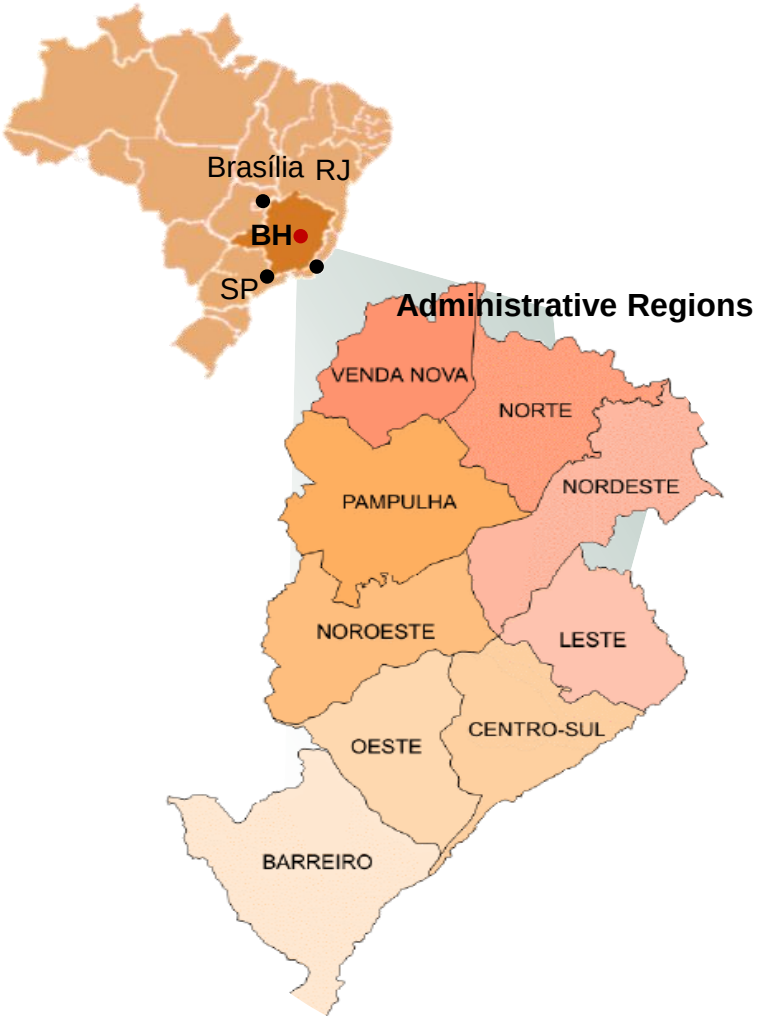
Belo Horizonte Schools

IFC Public-Private Partnerships Department

Agenda

- Belo Horizonte and the Education context
- Project Goals and Content
- Structure
- Lessons Learned
- End results

Belo Horizonte: facts and context



- **Population:** 2.4mm, and 5.4mm in the metropolitan region (3rd largest metropolitan area in the country);
- **Capital of the 2nd most industrialized State in Brazil;**
- One of the **host-cities** of the World Cup**;**
- **Pioneers** in the development of PPPs and Concessions in Brazil**;**
- Public Pedagogical services **highly-rated** by the population
- But **only 35%** of the children at the kindergarden-age had access

The expansion of Public Schools network were the most relevant demand at the Municipality by the population

Context:

- Child Education:
  - Restricted access (vacancies covered about 35% of demand)
  - New economic and urban contexts are pressuring the public network for new vacancies in child education
  - The waiting list had over 11,000 children
- Basic Education
  - The implementation of the integrated school, which serves full-time students, increases the need for new facilities
  - Universalized education (compulsory attendance / enrolment) – kindergarten level is Municipal's responsibility
  - High expenditures with school transportation in order to attend students who live far from the existing schools

Strategic Planning:

BH Goals and Results 2009-2012:

EDUCAÇÃO

- **Supporting Project 5. Child Education Expansion**

  Increase the number of vacancies for 0-5 years old children through the construction of 100 new UMEIs (kindergarten) = 44,000 new vacancies.

- **Supporting Project 6. Integrated School Expansion**

  Expand vacancy in the Integrated School for students attending daytime basic education classes

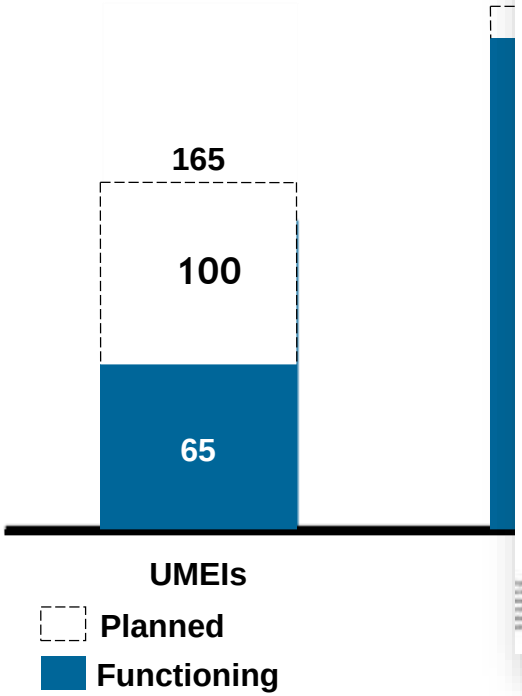
  Construction of 12 new elementary schools = 12,000 new vacancies.

- **Supporting Project 7. Improvement in the Quality of Education**

  Increase the quality of the municipal public education.

What was the story about? The expansion through the traditional public works model bear

Map of proposed units



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The main challenge = meet the current and future needs of the population with limited investment capacity

Challenges:

- Lack of enough resources (physical, technical and human) for new construction, faced with other investment needs by the Municipality
- Gap between supply and demand for public/free educational services *vis-à-vis* the actual schools network.
- Universalisation requirements: Municipalities obliged to provide education for children between 4 and 5 years old from 2016 onwards: pressure of demand on the public network

Key Questions:

Considering the current resource/capacity constraints, how is it possible to enable the construction of all new UMEIs and Elementary Schools in order to meet the goals and the population needs?

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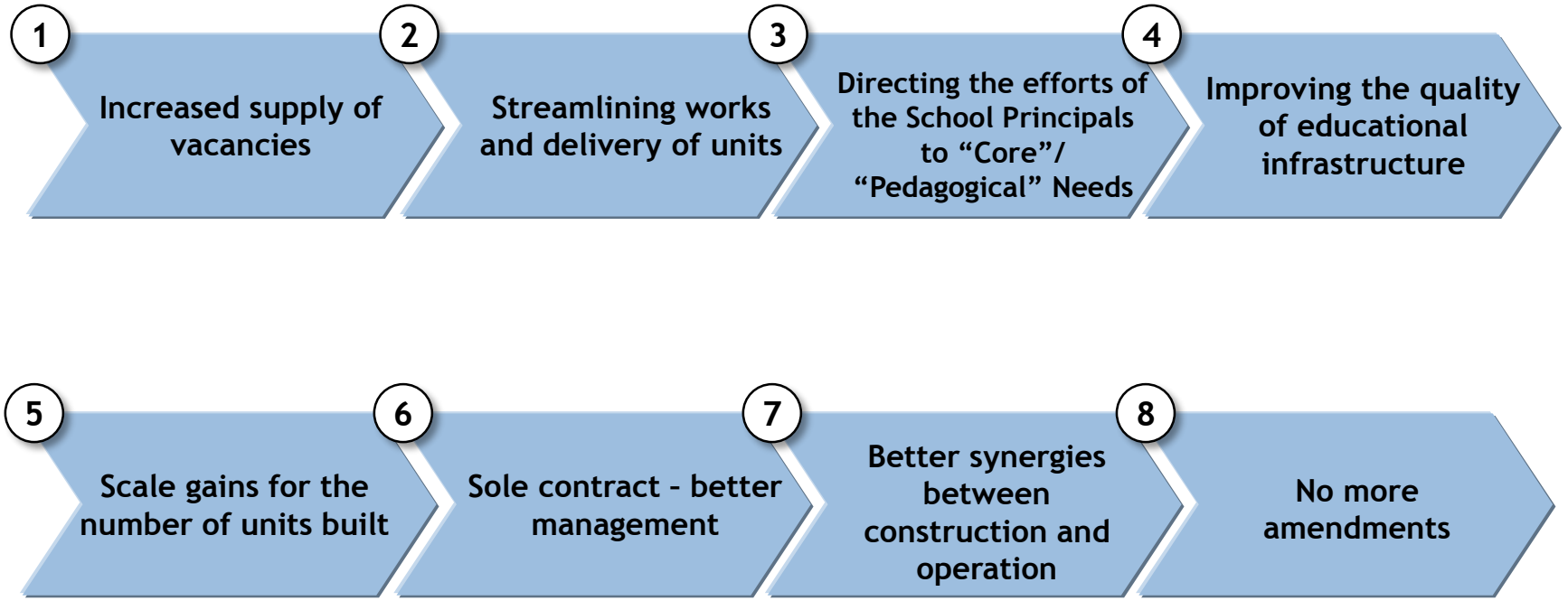
Project Goals



PPP is fully commited to supporting activities. The pedagogical activities remain under the Municipality's hands

Expansion and Improvement of the Schools Network

Final and educational activities

- Educational Organization
- Teaching, capacity building and teachers cadre' offer
- Pedagogical and didatic plan
- Analysis and management of the teaching indicators as well as of the quality of teaching
- Development / Acquisiton of the didatic material
- School catering
- Schools Transportation

Supporting activities

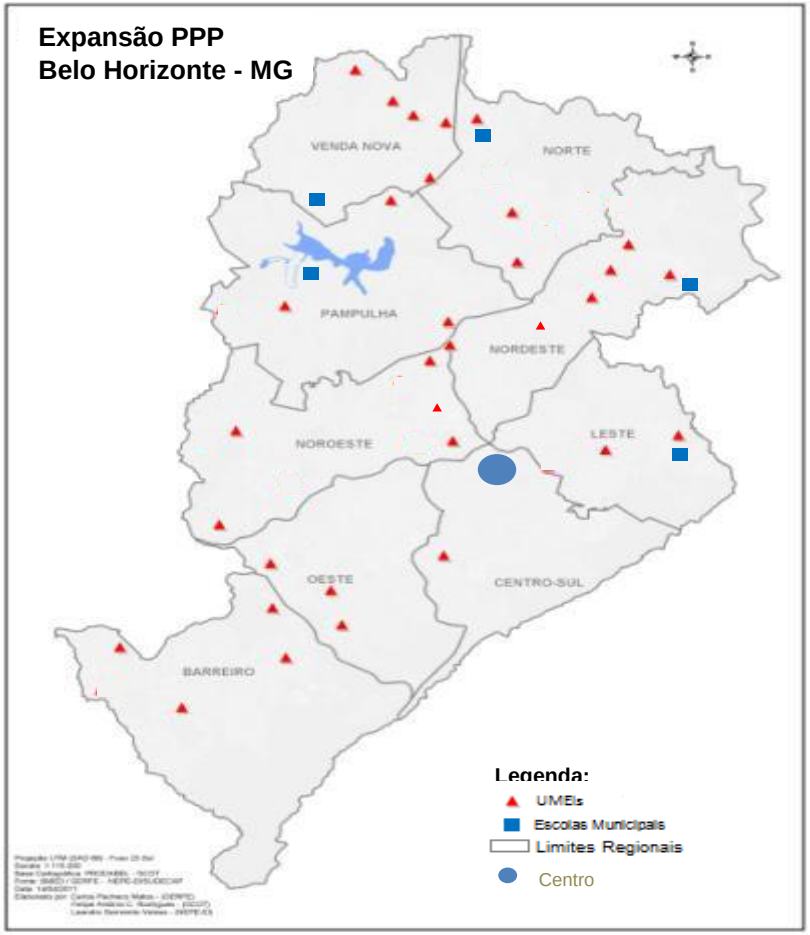
- Civil Works
- Equipment and furniture
- Administrative Services
- Cleaning and sanitation
- Laundry
- Utilities and Energy management
- Building's conservation and maintenace

PPP SCOPE

Project Scope

- 32 Kindergarten (0-6 yrs) – 440 children, 1,100m^2
- 5 Elementary Schools (6-14 yrs) – 960 students, 3,500m^2
- PFI covering:
  - Civil works
  - Furnishing and equipping
  - Administrative services
  - Facility management
  - Laundry
  - Utilities and Energy
  - Security

PPP to build 32 new UMEIs (Kindergarten) and 5 EMs (Elementary Level) units in one single contract



- Expansion of the number of school places at the Municipality level:
  - Kindergarten Level: **14 thousand places**
  - Elementary Level: **4,8 thousand places**
- Construction of 30 new UMEIs (kindergarten) and 2 reconstructions
- Construction of 5 new Elementary-Level Schools
- Amendment = plus 14 new units (after one year of contract)
- Length of construction: 37 units under a timeline of 2 years (10 units delivered within 12 months and the remaining within more 12 months = 24 months max)

PPP entails kindergarden and elementary school units, children from 0-14 years old

Unidade Municipal de Educação Infantil (UMEI) (Kindergarten Level Units)

Escola de Ensino Fundamental

Escola Integrada + Escola Aberta (Elementary Schools)

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14

Kindergarden | Primary Schools | 1º cycle | 2º cycle | 3º cycle

- Attendance: Children - 0 to 5 years old
- Functioning:
  - Mon to Friday from 7h às 17:20h
  - Community can have acces to schools during weekends
- Architectonic Project (developed by the Municipality) :
  - Capacity: 440 children
  - 2 floors
  - ~1.100 m^2 of constructed area
  - Nº units: 32
  - Highly acnowledged basic design

- Attendance: Children - 6 to 14 years old
- Functioning:
  - Mon to Friday from 7h to 17:20h- regular school
  - Mon to Friday from 18h to 22:20h – adults' teaching sessions
  - Community can have acces to schools during weekends
- Architectonic Project (developed by the Municipality):
  - Capacity : 960 children
  - 3 floors
  - ~3.500 m^2 of constructed area
  - Nº units: 5

Each Kindergarden-level unit (UMEI) supports 440 children from 0-5 years old - 1.100 m2 of constructed area

Fonte:Resolução CME/BH Nº 01/2000

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Fonte:Resolução CME/BH Nº 01/2000

Architectonic Design is a reference of the Federal Education Department and won prizes

1º Place – CBA – Categoria: Ed. Atividades Educativas

Exhibition in South Korea- 2010

Reference Project in Child Education - MEC

Minas Gerais Arquitetura Contemporânea

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IFC's Scope of Work

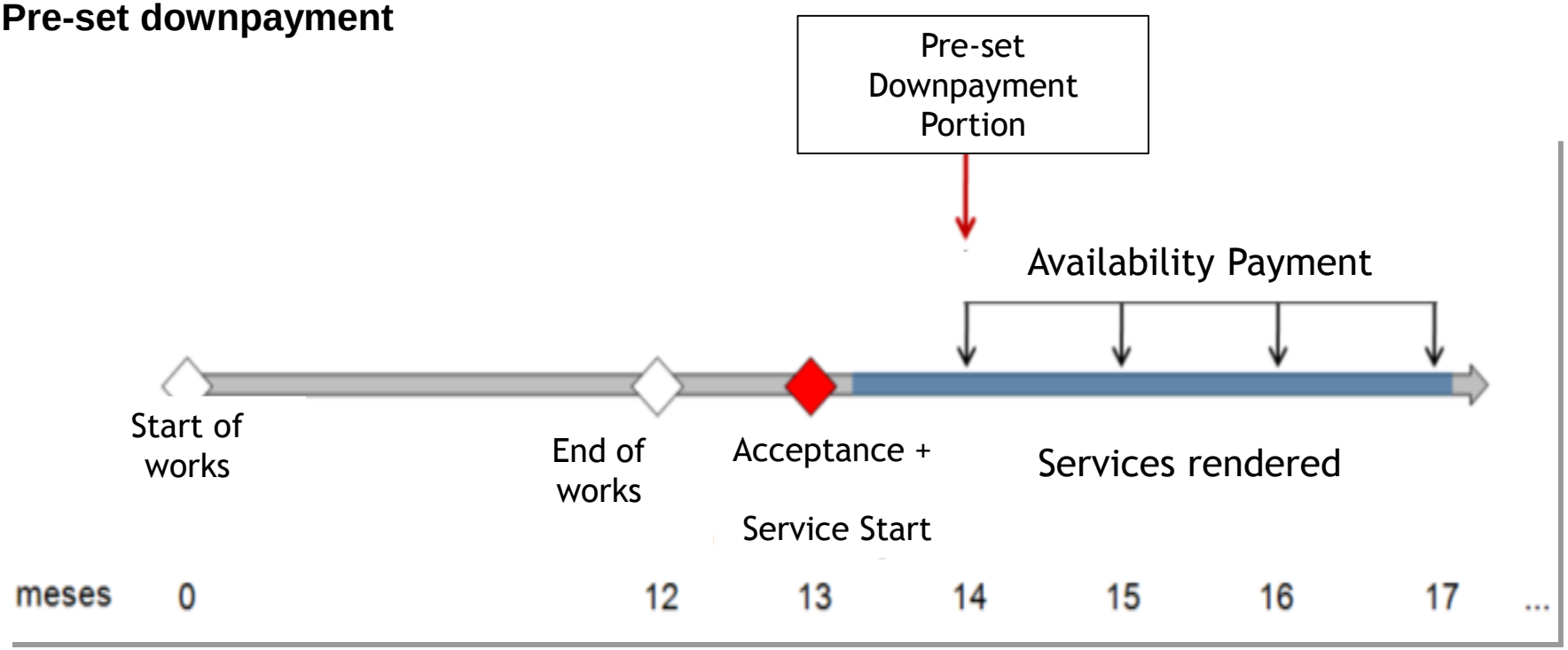
- Technical, Commercial and Legal Due Diligence
- Market Consultations to assess attractiveness requirements
- Development of the Transaction Structure
- Bidding Documents Preparation
- Project Marketing
- Assistance during the Bidding Process

Basic Project structure

- **Concession period**: 20 years
- **Maximum Government availability payment**: USD 1.608 mm per month
- **CAPEX**: USD 70mm (91% of which being civil works)
- **OPEX**: USD 10mm / year
- **Downpayment** of USD 49mm (60% federal + 40% municipal)
- **Government payment** based on KPIs

To speed up units delivery, federal and municipal resources were used as funding source of the PPP, with a pre-fixed downpayment amount upon the delivery of each unit

Pre-set downpayment



- Pre-set payment paid by the Public Authority, upon 30 days of the conclusion and acceptance of each one of the schools units

Availability Payment equation

Formula

VECP (R$) = VMCP (R$) x FO (%) x FD (%)

- **VECP (ACTUAL AV. PAYMENT)**
- Amount effectivelly paid to the Concessionaire;
- Linkede with the number and type of unit under operation and accordin to KPIs;

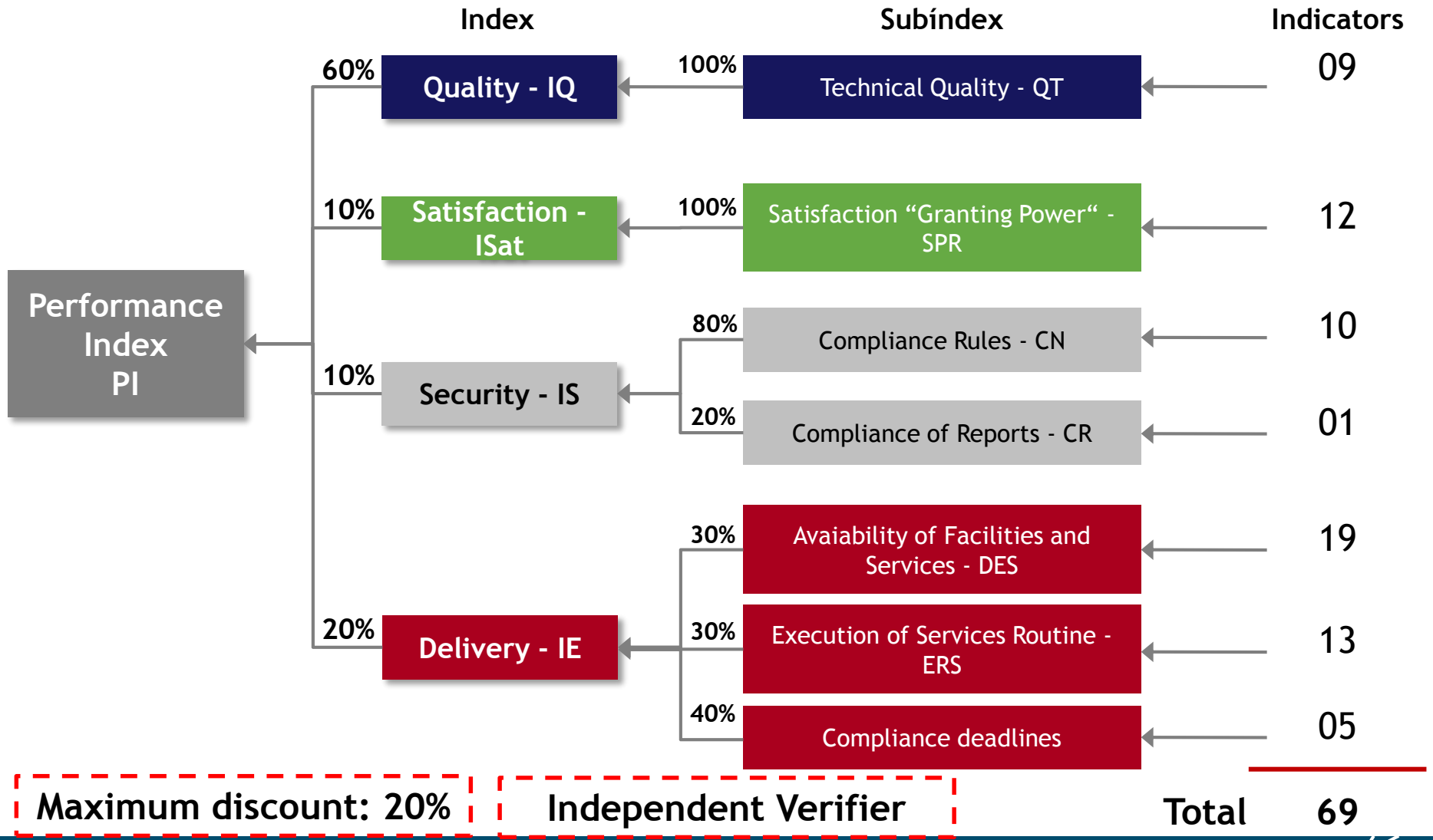
- **VMCP (MAX. AV. PAYMENT AMOUNT)**
- Nominal amount of the availability payment;
- Constant value of the contract.

- **FO (OPERATIONAL FACTOR)**
- Adjustment Factor – accordingly with the number and type of units under operation at that month;
- Varies from 0% to 100%, according to the number of units under operation.

- **FD (PERFORMANCE FACTOR)**
- Adjustment Factor of the Av. Payment according with the ID (Performance Index);
- Based on the measurement of the ID of the previous month carried forward by the next three months.
- Varies from 85%[2] to 100%.

FO = 2,20% x Number of UMEIs in operation + 5,92% x Number of EMs in operation
0% ≤ FO ≤ 100%, according to the number of units in operation

Performance Measurement System



Principal Risk Matrix

Concessionaire	
Risks	**Reasons**
Construction risk	Concessionaire controls better this risk
Financing	Private Sector is responsible for getting financing and negotiating its terms
Operational	Concessionaire is in charge of all the operational aspects of the project
Change in cost of capital, inflation, interest rates, FX	General macroeconomic prices are not a Project-specific risk. Availability payment is adjusted according to Brazilian CPI.
Environmental Liabilities upon signing	This is a contingency that can be known during due-diligence. It was precified in the financial model.
Land Geological risks	Risks known a priori *by certain* geological studies available to bidders..

Granting Authority	
Risks	**Reasons**
Expropriation / Urban Authorization and Licensing Issuance	Key issue that can impact the implementation (time, $) of units, but mostly under the Municipality's hands
Higher costs due to change of the available list of land	Lands were known upfront in the bidding documents.
Delays due to lack of action to issue licences to free land	Authorizations/Licenses are a municipal / granting authority responsibility
Vandalism	Usual occurrence in Brazilian public schools, better managed by the Public Sector
Unilateral Changes of specification requirements (technological innovations)	Technological changes are unforeseeable. Difficult risk to allocate to private concessionaire.
Force Majeure (non-insured)	Best practice

Guarantee structure

- Downpayment from federal funds
  - Reduces fiscal exposure of the municipality
  - Decreases the monthly government payment, providing additional room for other projects
  - Reduces the guarantees needed for the project

- Backstop facility comprised by liquid assets (i.e. National Government Bonds) to guarantee 6 months of availability payments coming from the municipality

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A bit of lessons learned

•**PPPs could be an effective tool to develop educational infrastructure (PFI),** when complemented by programs to enhance public educational services.

- **Lesson:** PFI approach can be structured in a simpler way and achieve good development

• **Land availability is crucial for implementation speed:** One of the reasons for strong implementation speed was the priority working group created by the Municipality to free and regularize available land.

- **Lesson:** Priority on land regularization is key

• **Construction methodology is also key:** Modular architectonic/construction methodology is key to gain scale and allow a more speedy delivery of spread-out units.

- **Lesson:** Have interested players that are able to construct in such a manner and in a way able to generate such an economy of scale.

•**Guarantee mechanism**: mismatch between the time taken to create a backstop facility and the project chronogram.

- **Lesson**: include the creation of the backstop facility as a condition precedent to the contract execution

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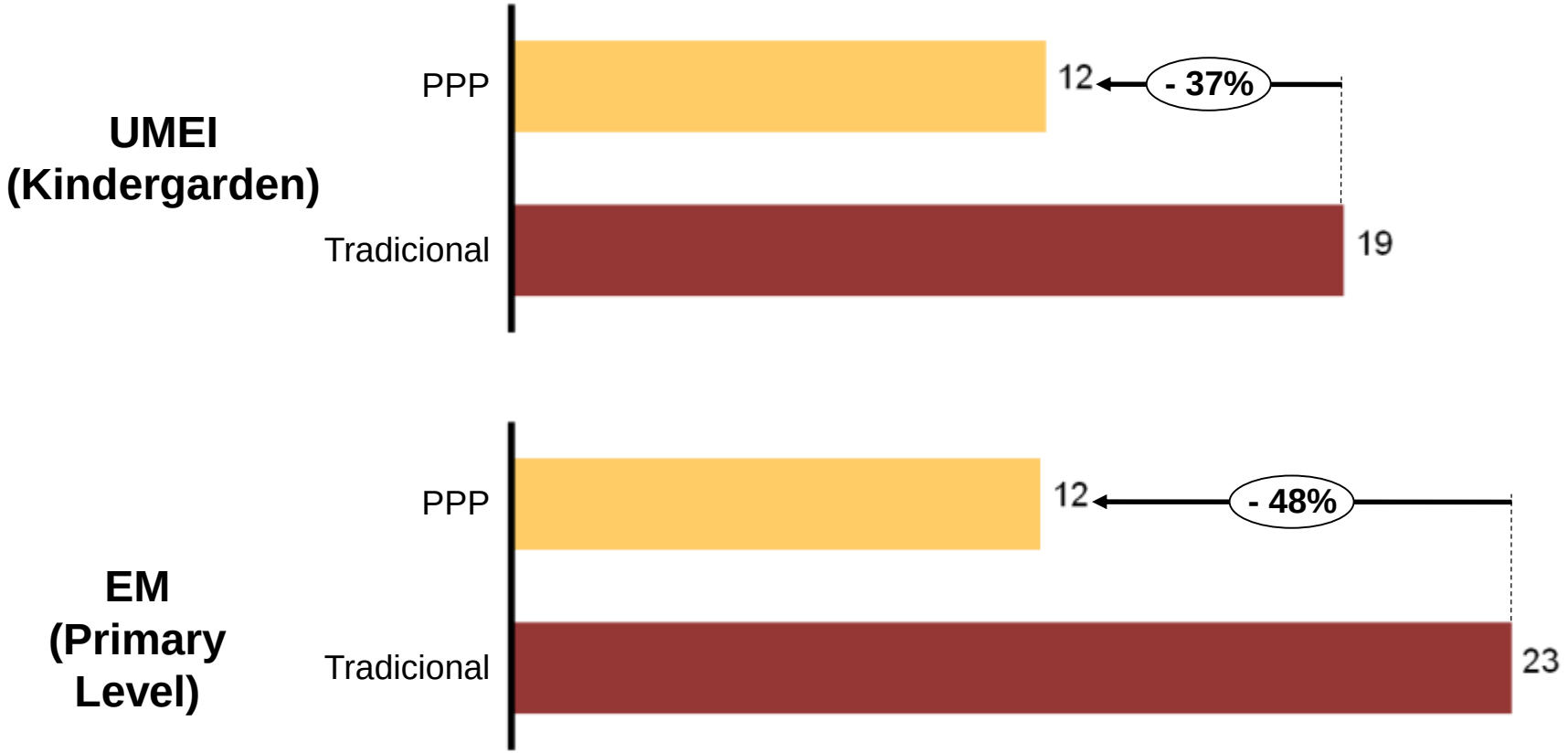
Timeline and results

- The Belo Horizonte Schools PPP was the first education sector PPP in Brazil
- IFC mandate engagement: March, 2011
- Launching of Bidding: April, 2012
- PPP Contract signing: July, 2012
- The first school began operations in September, 2013
- In August, 2014, there was a Contract amendment encompassing the construction of 14 more schools (Kindergarten), which shall open 6,000 additional vacancies

PPP/PFI model showed to be the best implementation strategy in terms of timeline

Forecasted construction length via PPP vs. Traditional Public Works Model



Awards

- In 2012, KPMG considered the Belo Horizonte Schools PPP one of the top 100 Inspirational and Innovative urban infrastructure projects in the world
- This Project also led Belo Horizonte to be nominated as a Latin America Region finalist in the Financial Times/Citi Ingenuity Awards 2013