

This is not an ADB material. The views expressed in this document are the views of the author/s and/or their organizations and do not necessarily reflect the views or policies of the Asian Development Bank, or its Board of Governors, or the governments they represent. ADB does not guarantee the accuracy and/or completeness of the material's contents, and accepts no responsibility for any direct or indirect consequence of their use or reliance, whether wholly or partially. Please feel free to contact the authors directly should you have queries.

# First Uzbekistan STEM Laboratories

15 June 2021



# UZBEKISTAN



**Population:** 34 million

**Major industries:** Natural gas, oil, metallurgy, chemical industries, cotton and silk processing, agriculture, cars manufacture.

**National cooperation in developing STEM education:** MoPE, ITSM, Avloni, REC

# Uzbekistan – first STEM Labs delivery plan



## 1. Aspiration

*What are we trying to achieve*

### Problem Statement

According to the UNICEF Research data in 2020, understanding of the Science at public schools is 62, 3% rate, while application of science knowledge is at 56, 8% rate. Moreover, higher level thinking ability in Science is at 50, 1% rate. Overall, the results demonstrate that primary schools student' achievements is not sufficiently high, especially compared to the performances of the other countries in international assessment, like Singapore, Korea, Japan, Russia, Finland and Kazakhstan. But on the same level with Lithuania, Croatia, Serbia and higher than Georgia

Abovementioned data show that education based on theoretical knowledge and lack of practical methods of teaching doesn't correspond contemporary standards of education.

Also, existing laboratory equipment is not in proper condition or doesn't exist at all which leads to illiteracy of science teachers in using laboratory equipment and impossibility to make lessons practical.

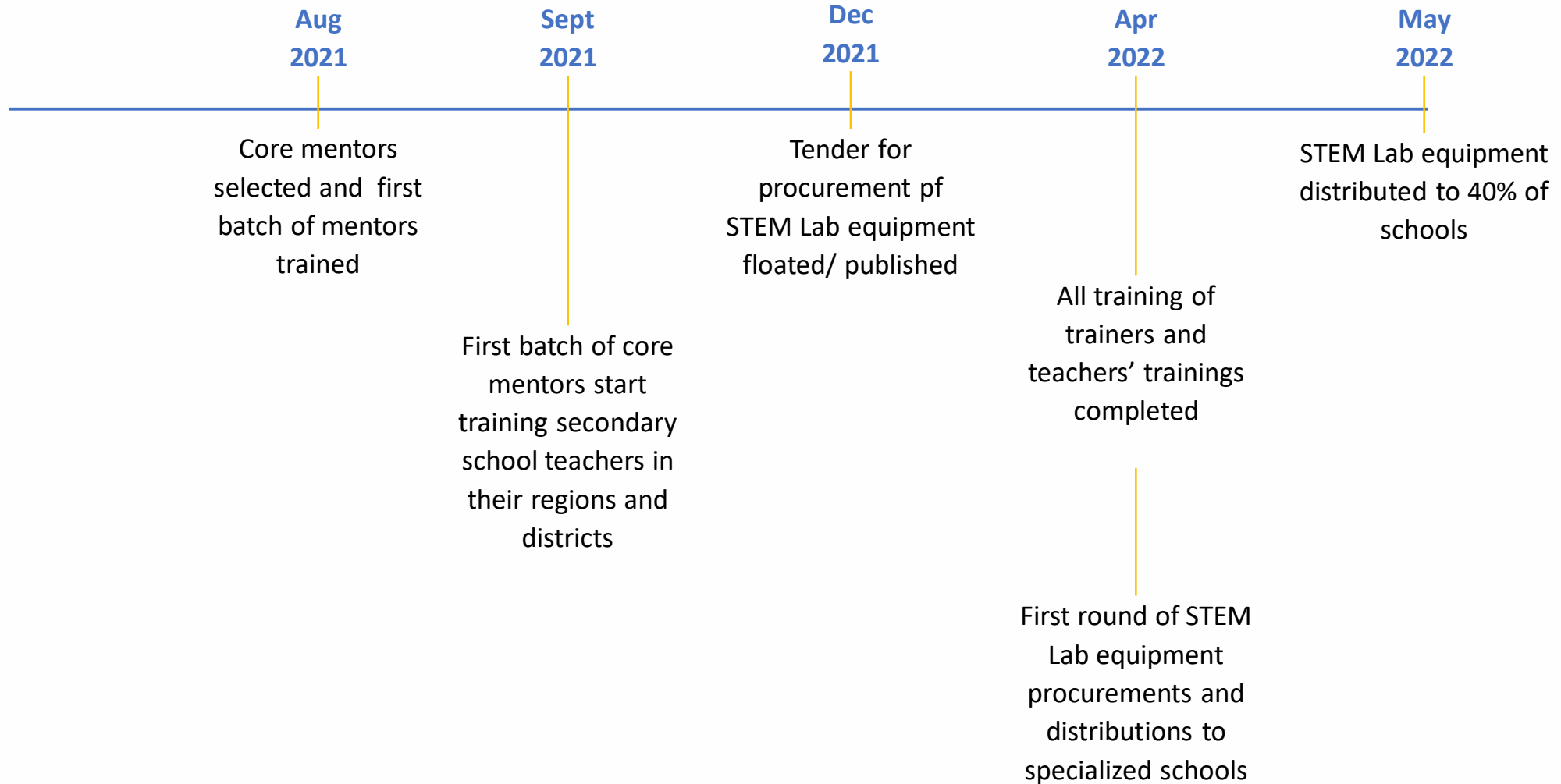
### Our Aspiration

- Improve Science higher-level thinking
- Enhance quality of Science teaching' within STEM program for ability to apply for experiments and lab works for students

### Goals

- Enhance quality of teaching and learning fundamental disciplines as physics, biology, and chemistry in secondary schools in within STEM program
- Avail 200 specialized school science lab equipment

# Milestones

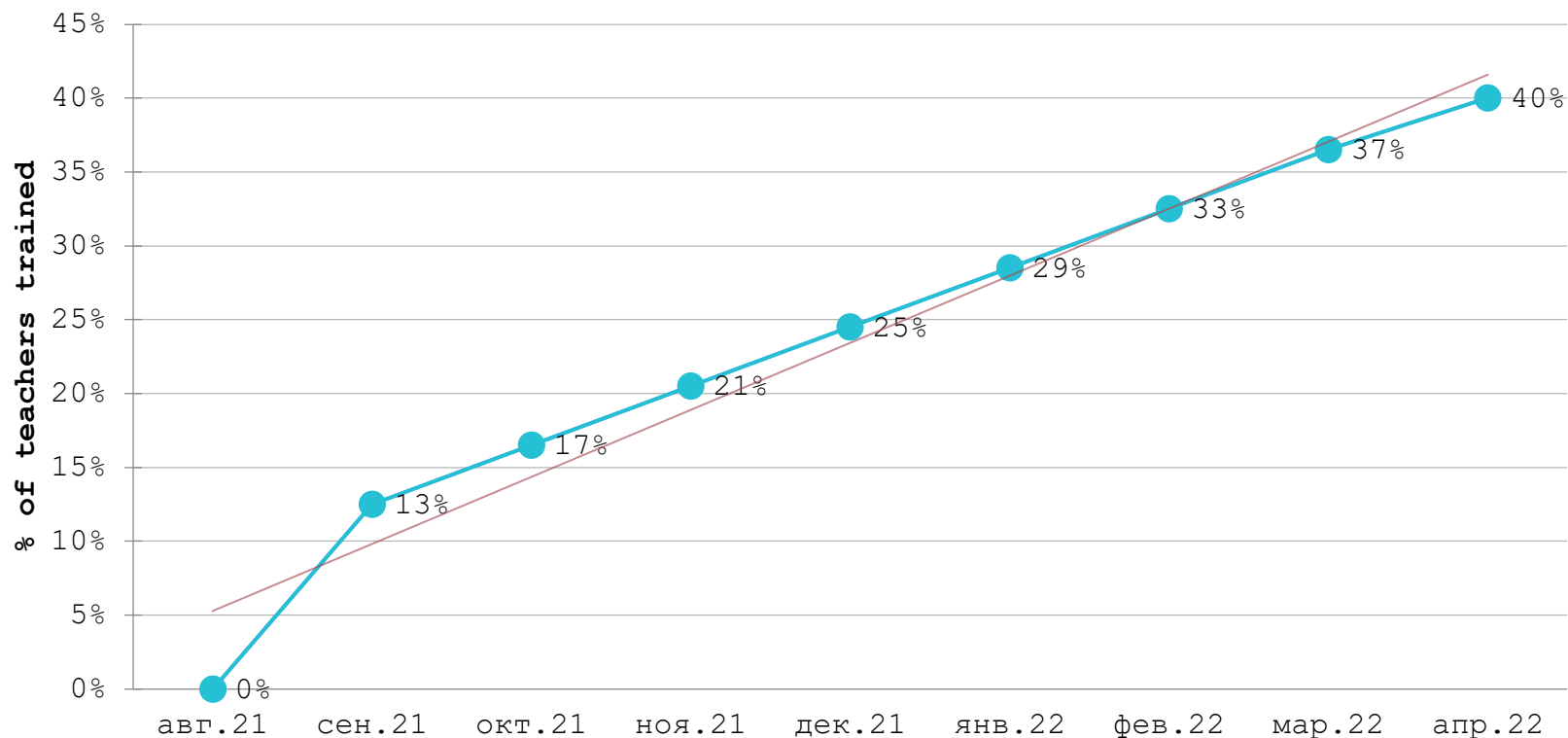


# Targets and trajectories (1/2)



**Goal:** Enhance teachers' skills in teaching fundamental disciplines as physics, biology, and chemistry in secondary schools within STEM program

**Target:** Around 40% of secondary school physics, biology, and chemistry Teachers are (re)trained with practical knowledge of Lab-works by April 2022

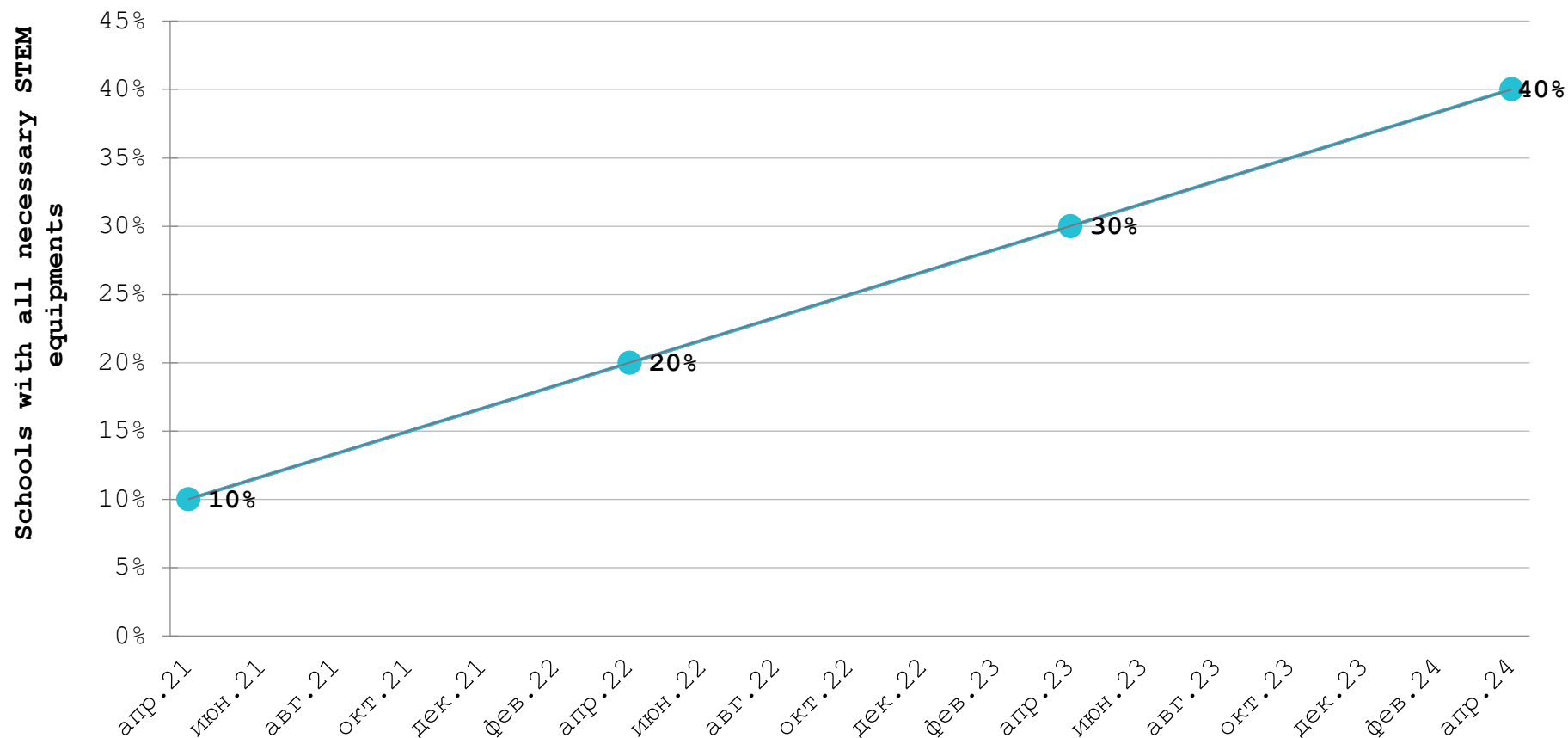


## Targets and trajectories (2/2)



Goal: Enhance Avail standard school science lab equipment at schools

Target: 40 % public secondary schools in Uzbekistan are equipped with all necessary functional STEM labs by April 2024





# First Uzbekistan STEM Laboratories

