

# The Changing Life of a “Simple”(?) Converter

Presented by

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President



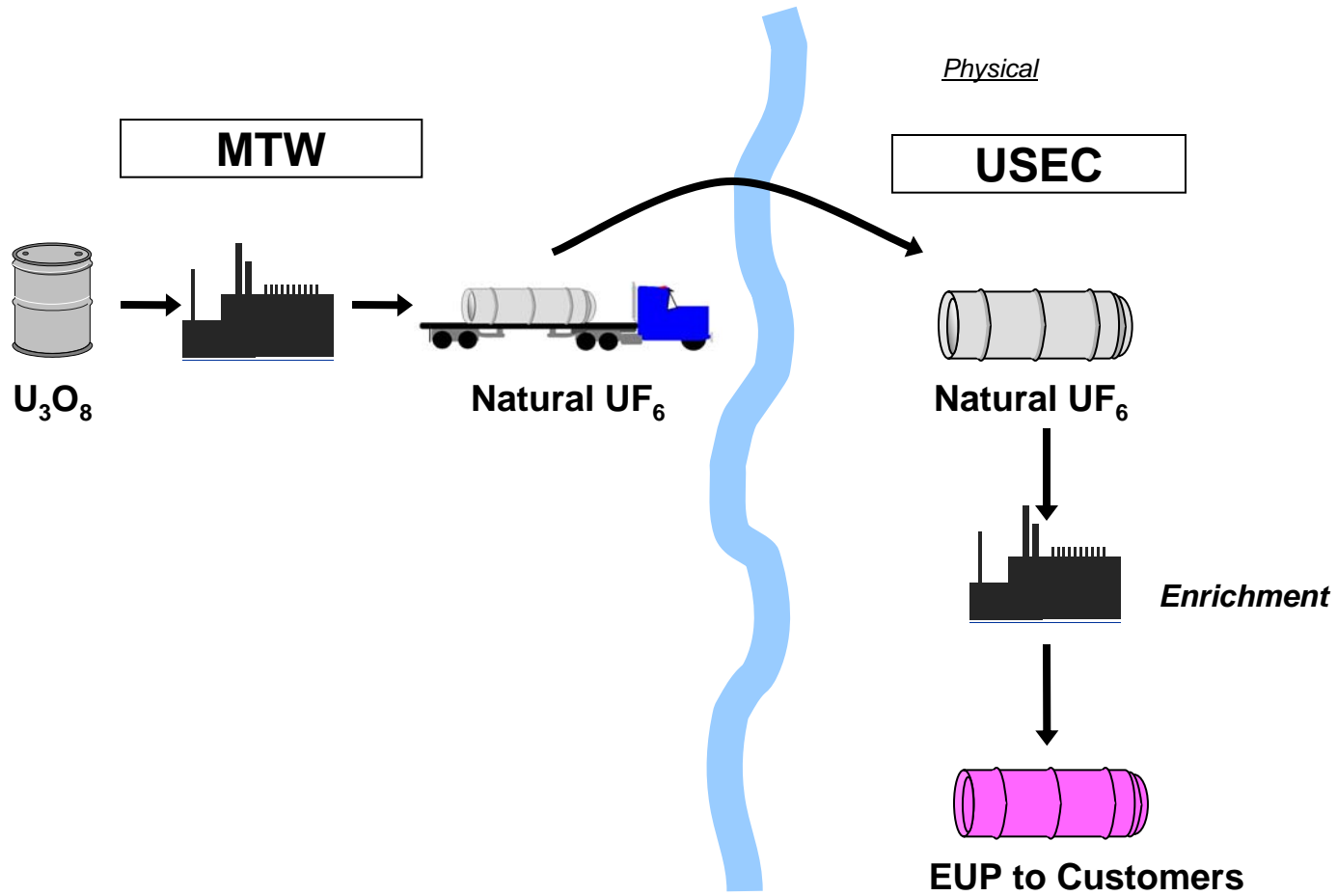
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September 6, 2002

# Historical Metropolis UF<sub>6</sub> Material Flow



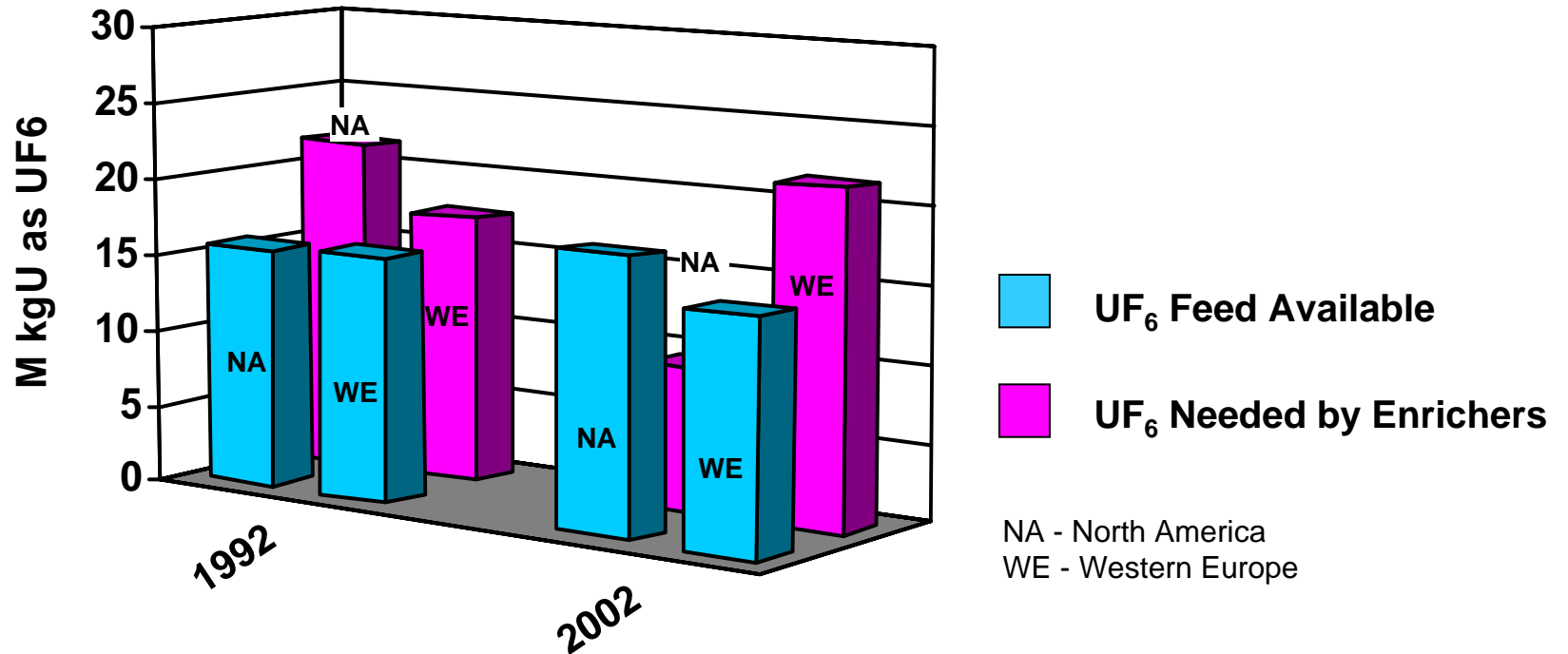
## ConverDyn's Newest Role:

- ▶ *Facilitator to the U.S.-Russian HEU agreement by delivering physical UF<sub>6</sub> to overseas locations*

# North American Conversion

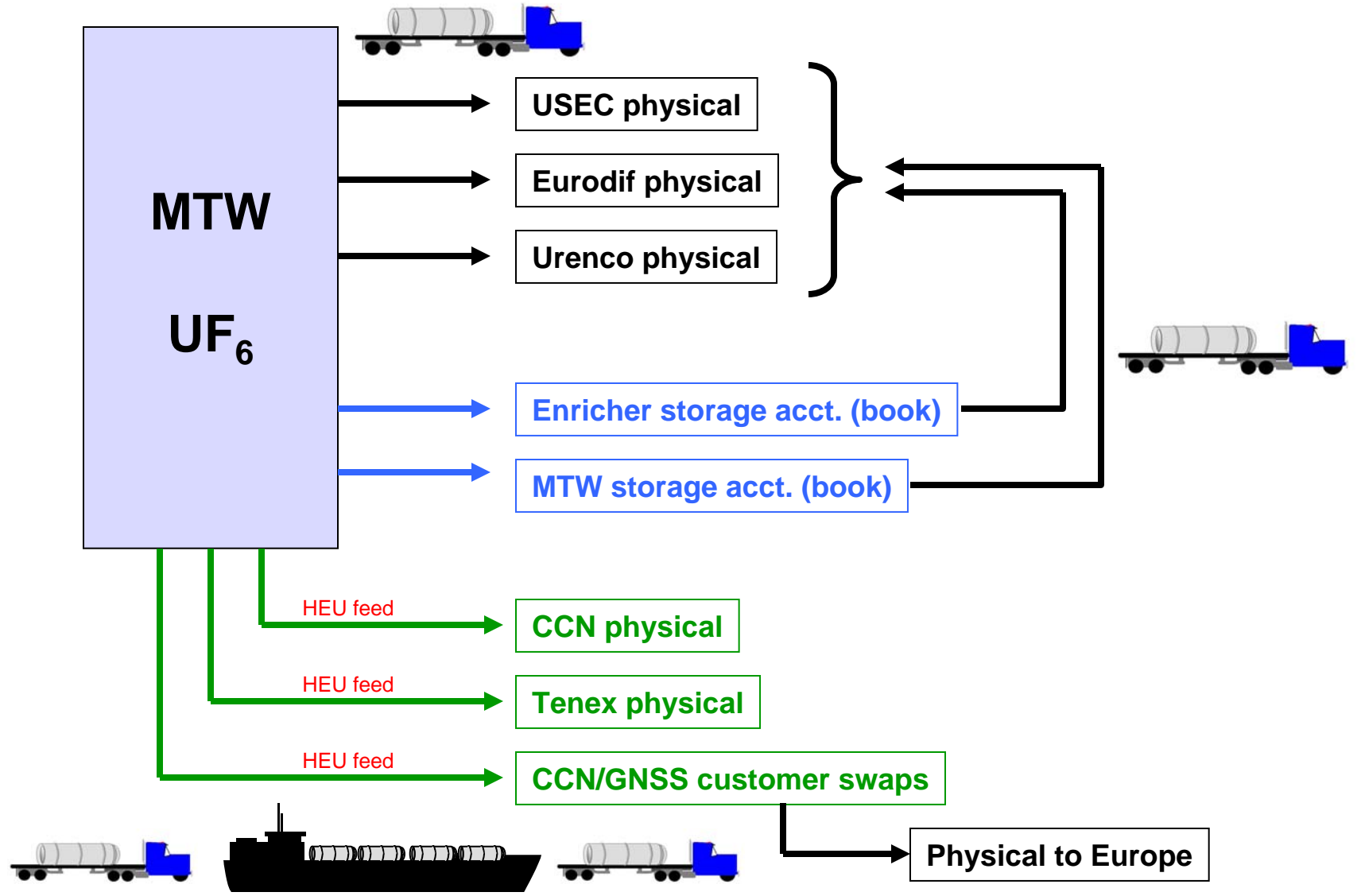
- ▶ USEC's government-supplied UF<sub>6</sub> inventory impacts only North American feed flow
- ▶ Majority of Russian feed material will primarily impact North American feed flow
- ▶ Change in the enrichment industry has permanently impacted North American feed flow

# Conversion (Im)Balance 1992 vs 2002



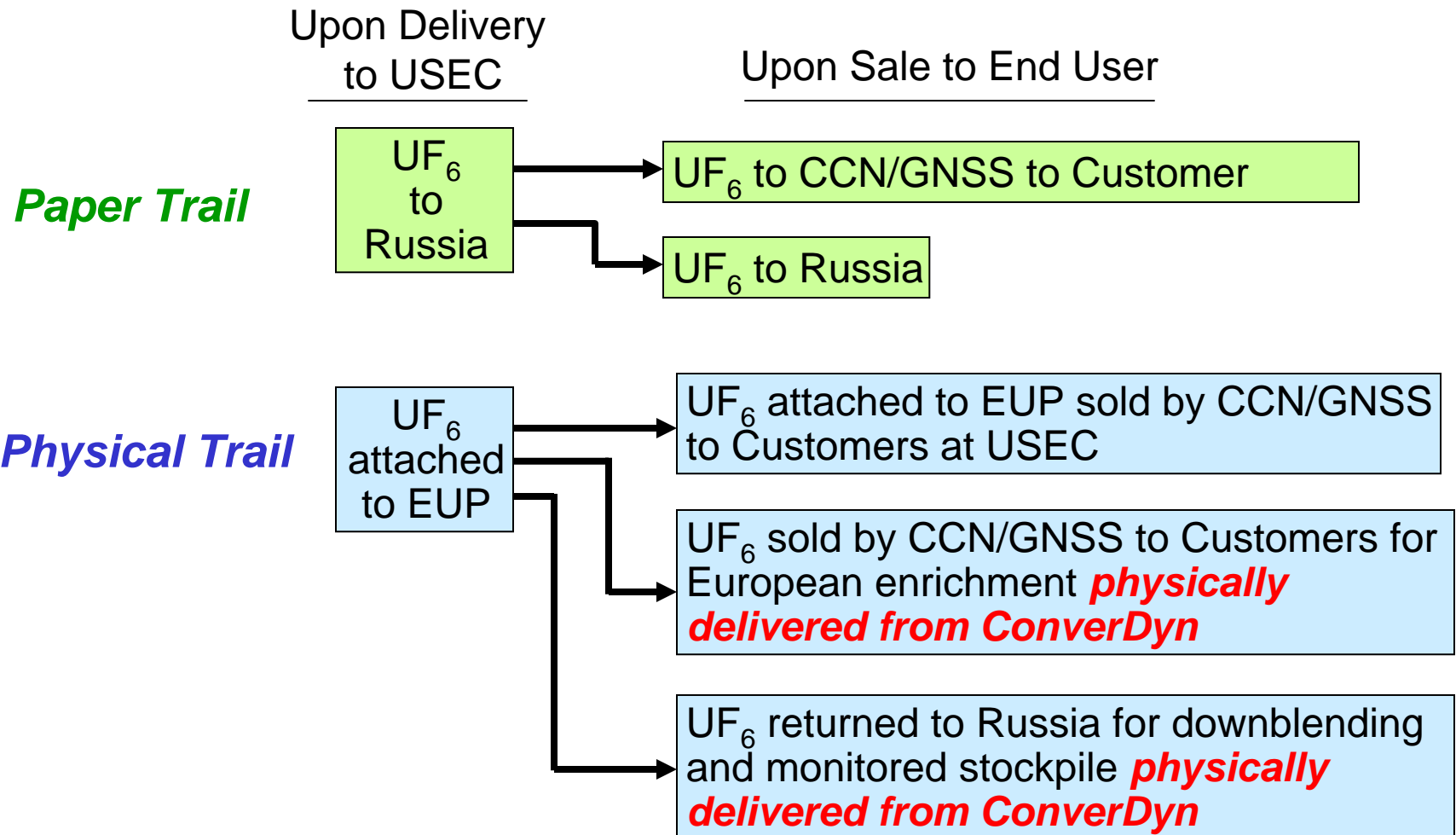
Sources: ConverDyn

# Possible Flow Paths for Metropolis UF<sub>6</sub> Today

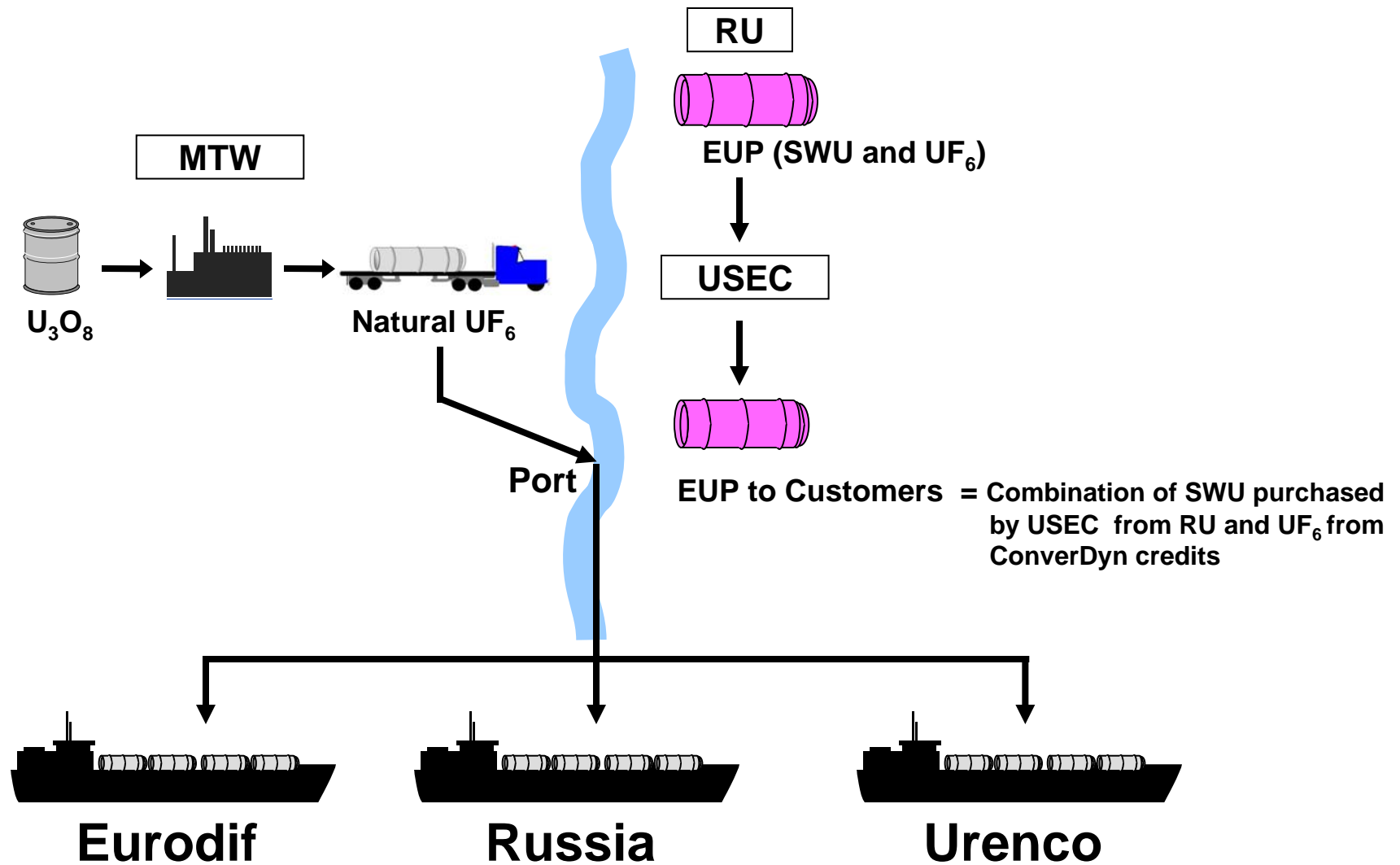


# *Russian Downblended HEU:*

## *Do you know where your feed is?*



# Metropolis UF<sub>6</sub> Material Flow Today



# Transportation Concerns

- ▶ **Conflicting Schedules**
  - ✓ Metropolis production vs enricher pickup
  - ✓ Metropolis delivery vs transporter schedule
- ▶ **New mandated security procedures**
- ▶ **Longer lead time on binding notices**
- ▶ **Cylinder availability - critical to Metropolis**
  - ✓ TS-R-1 requirements for thermal protection

# Valve Protection

## Cylinder Valve



## Old-style Protector



## New VPA



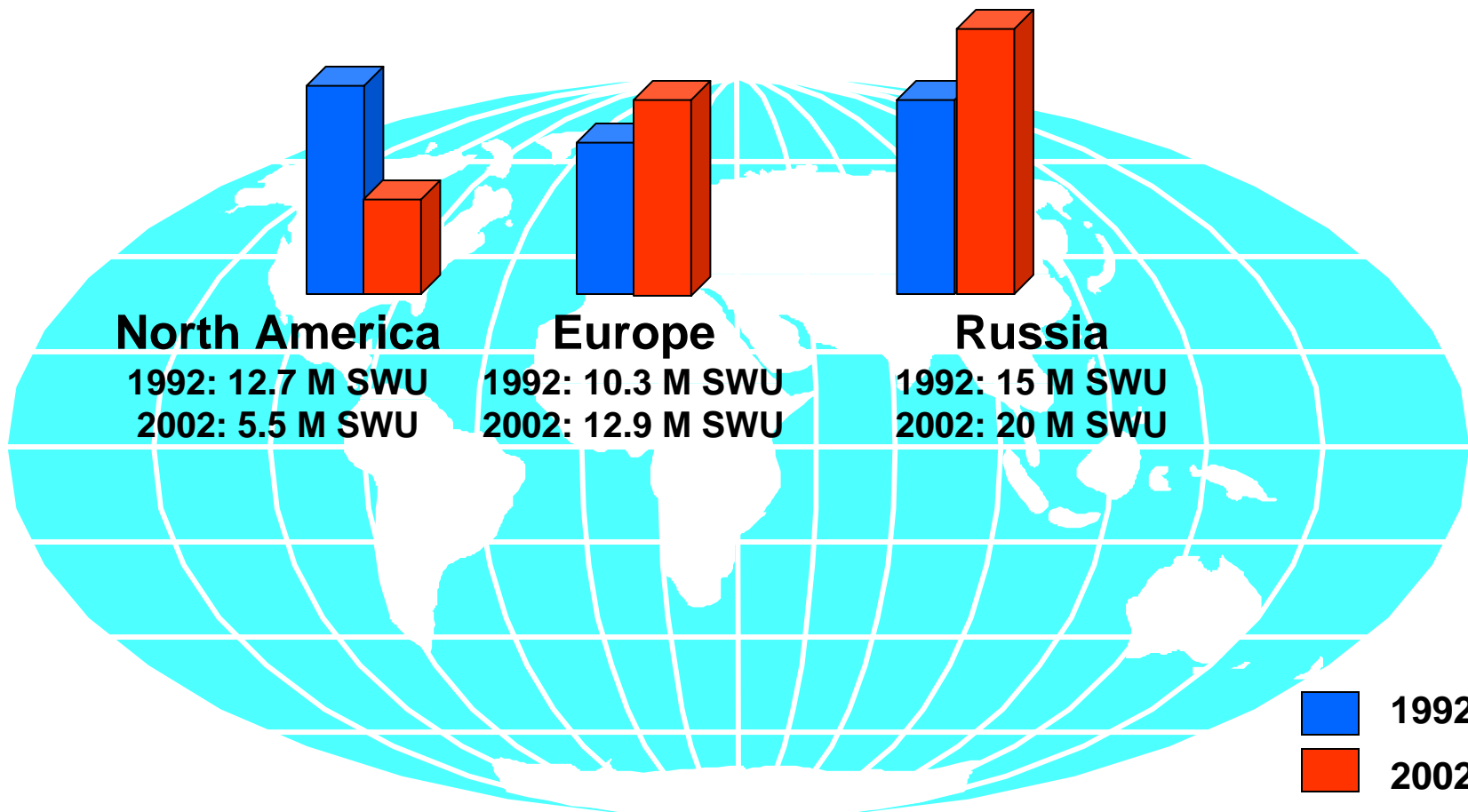


## **“Blanket” Concept for Thermal Protection**

# **Future Enrichment Evolution: Where, When, Who??**

***Important to the Converter!!***

# Evolution of Enrichment Production 1992 to 2002



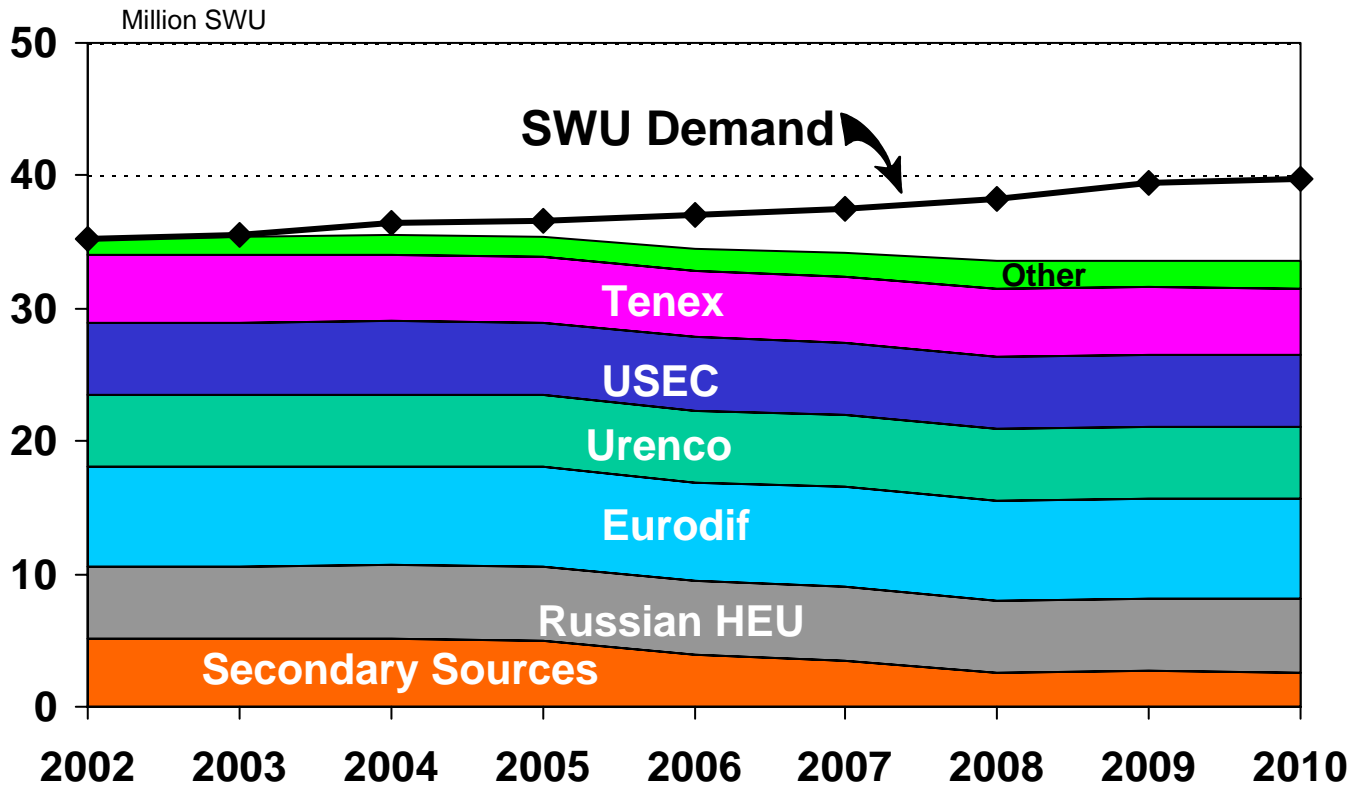
## Where, When, Who?

- ▶ Urenco in Europe: Planned expansion in progress
- ▶ Urenco (LES) in North America: Online by 2007 at the earliest??
  - Increase in North American production or displacement of high cost existing production?
- ▶ USEC: Potential new economic capacity will only displace high cost current capacity in 2010 at the earliest?

***Will North America ever see increased capacity?***

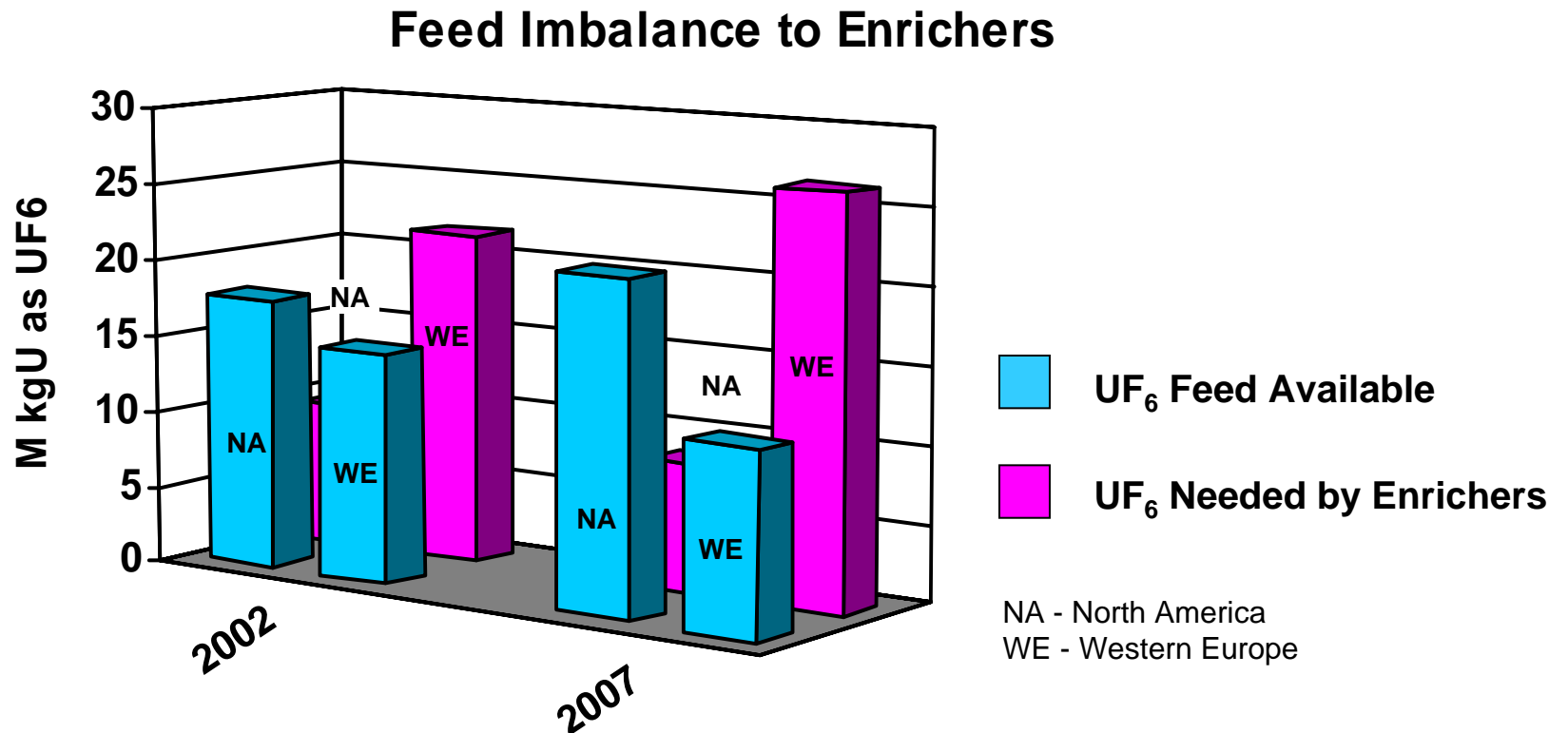
# World SWU Supply/Demand

Primary enrichers at **current rates**



Sources: World Nuclear Association, ConverDyn

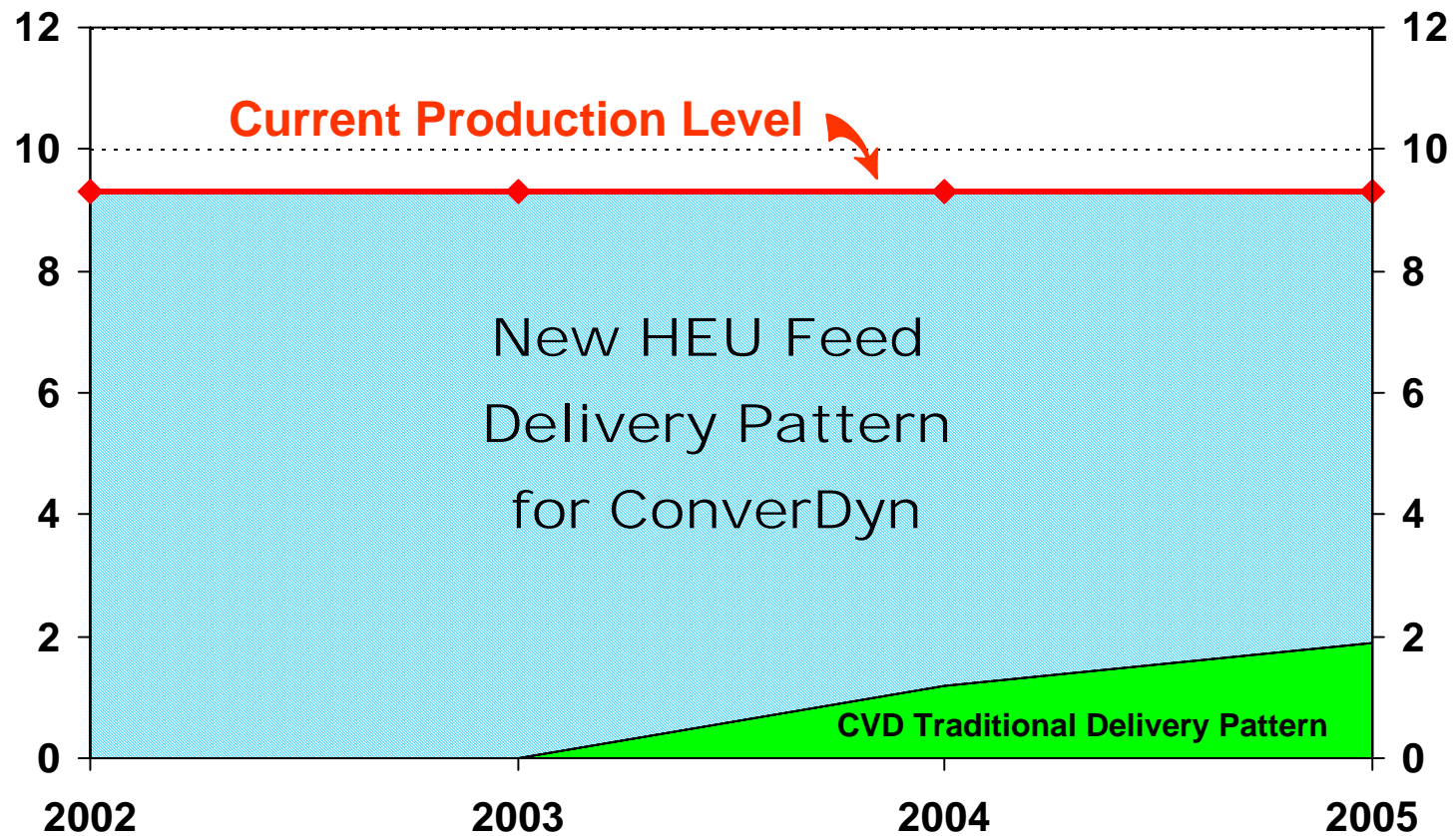
# Conversion Imbalance with Planned Enrichment Expansion in Europe



Sources: ConverDyn

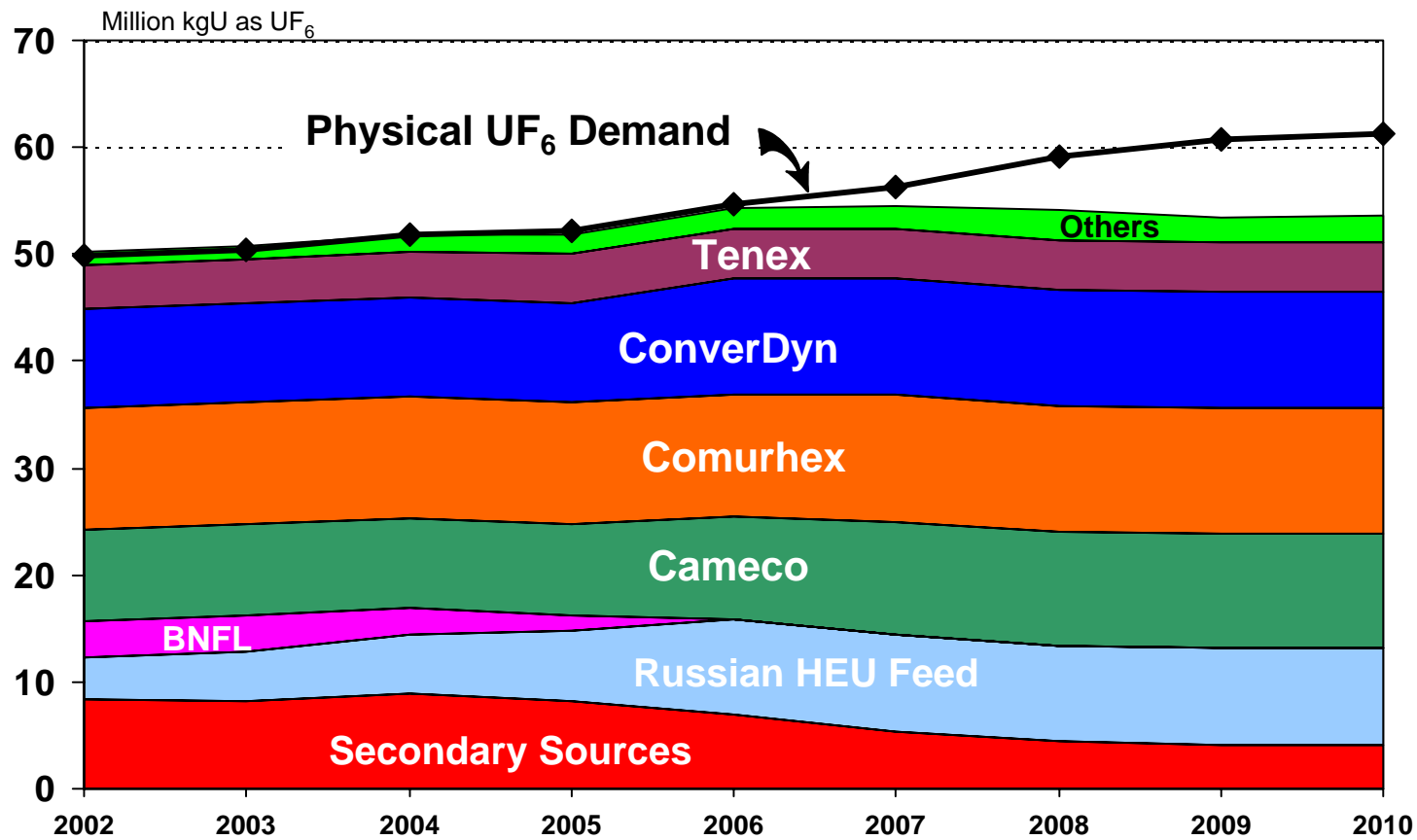
***Physical Transport Comes of Age***

# Potential ConverDyn Deliveries of Physical UF<sub>6</sub>



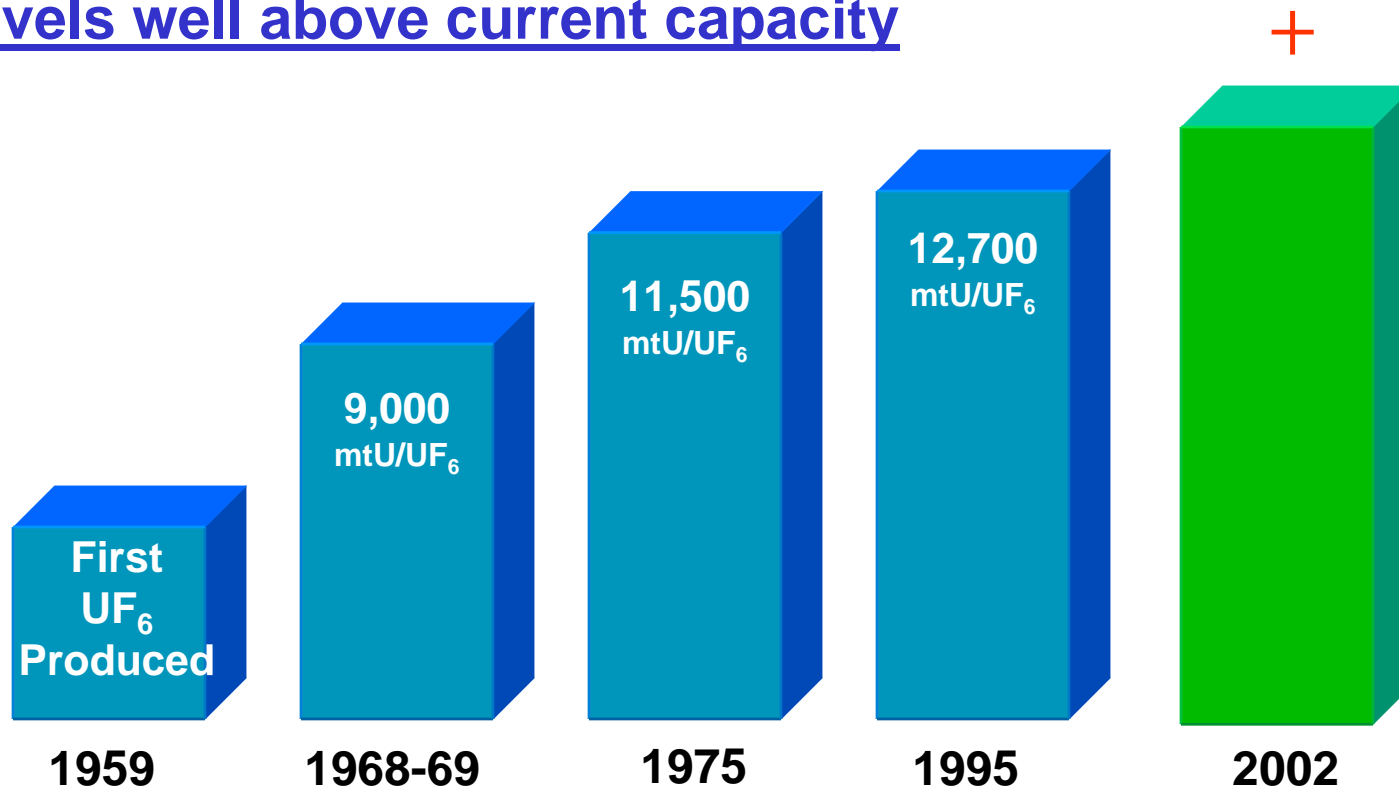
# Physical UF<sub>6</sub> Feed Supply/Demand

Primaries **Expanding to Current Sustainable Levels**  
by 2007



# Metropolis Works: Prepared for the Future

Plant re-engineering completed  
In early 2002 allows for rapid  
expansion to sustained production  
levels well above current capacity



# Conclusions

- Complex HEU deal needs this “simple” converter
- Transport of UF<sub>6</sub> from New World to Old World will increase dramatically
- Available Metropolis capacity can meet projected shortfall

# The Changing Life of a “Busy” Converter

