(U) Linking Legacies as a Basis for Categorizing Data in the Complex

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Linking Legacies

DOE Report

The Linking Legacies (LL) document created by the DOE in 1997 categorized the work scope of the US nuclear complex. Several significant challenge to the modern NNSA complex can be addressed by adopting a modified version of LL framework for categorizing data and processes. To that end, two additional categories have been identified as well as sub and sub-sub categories related to ongoing work. Adopting the expanded Linking Legacies as a data categorization tool will allow more precision when assigning need to know, creating training plans, and facilitating knowledge discovery especially as data are joined through future data sharing initiatives.

Figure 1. The original 1997 Linking Legacies framework has 8 categories and no subcategories.

LANL Addition to LL

SUB & S SUB-SUB CATEGORIES

A subset of Weapons Production at LANL have begun using the LL framework to categorize their scope of work (Figure 2). LANL has identified two additional top-level categories (ESH & Waste) that do not appear to be covered in the original 8 categories. More are likely to be added but should be done so deliberately and rarely.

Figure 2. Example of categories and subcategories added by LANL weapons production. Ad additional two categories, and many other sub and sub-sub categories were created in order to capture their scope of work. A similar effort would be needed to make the LL taxonomy apply complex wide.

Advantages

SPEAKING THE SAME LANGUAGE

As the nuclear complex heads towards a future where all levels of data are shared, it will be vital to know which data are related, and how they are related to one another.

NEED TO KNOW

Within a taxonomy defined by the linking legacies framework, classes of knowledge can be created using LL taxonomy numbers. These topics or individual categories can be assigned as need to know to workers.

KNOWLEDGE DISCOVERY

For workers learning more about a topic, finding documents and data can be streamlined using the LL topic numbers.

CREATING TRAINING PLANS

Onboarding new workers efficiently is significant challenge within the complex. The LL taxonomy can be used to assign relevant topics and instructions in new hire training plans.

Challenges

CREATING A COMMON LL TAXONOMY

By far the biggest challenge to implementing the LL taxonomy is ensuring all interested parties have a say in the process, that taxonomy categories are well understood, and that an agreed upon mechanism is in place to settle disagreements when they arise.

LL CHANGE CONTROL BOARD

The most likely method for addressing these challenges would be establishing a change control board with representatives from each stakeholder.

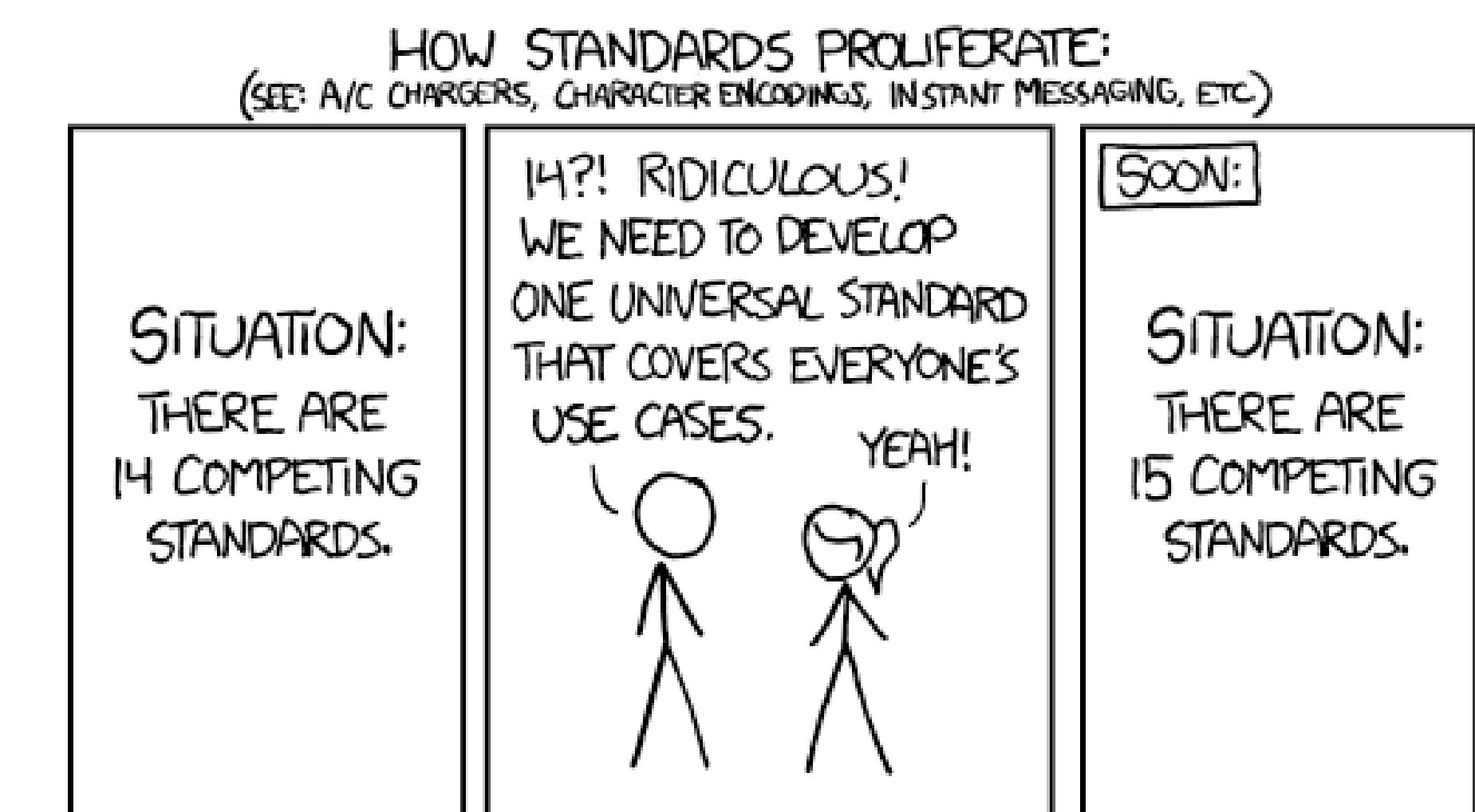Failure to get buy in will result in the splintered situation we currently have or…worse…
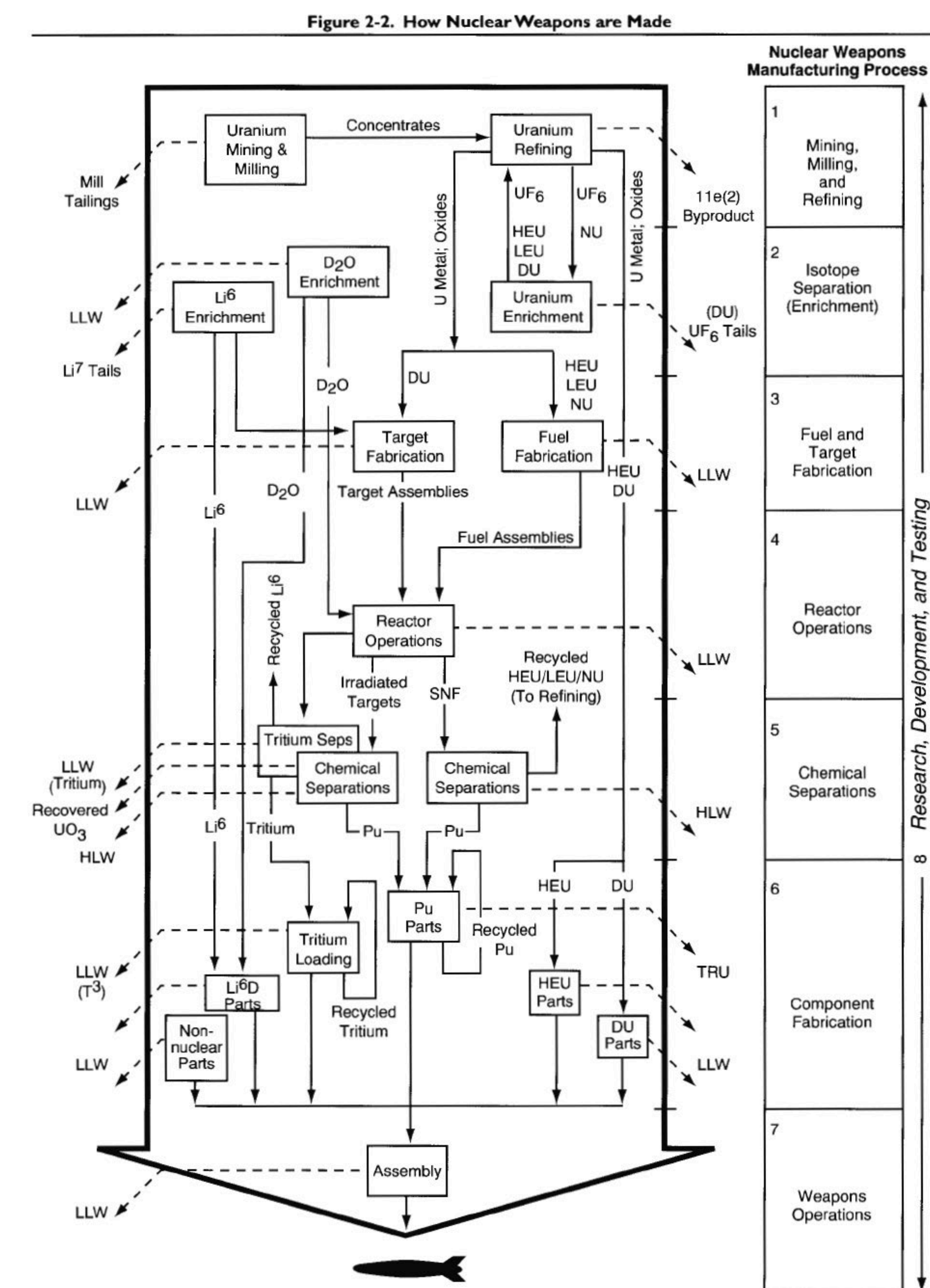

Figure 3. XKCD.com comic #927

Next Steps

WRS OLV TAXONOMY

In the process of translating the existing WRS Online Vault structure to the LL taxonomy by adding relevant subcategories.

These results will be presented to various LANL groups and interested parties for input.

Conclusions

IF INTERESTED PLEASE CONTACT ME

This is an ongoing research project. If this speaks to you and you'd like to explore whether the LL taxonomy makes sense for you and your organization email me - mikeh@lanl.gov