### Beyond Exascale Computing Panel (Frank's Personal View)

or

© Copyright 2014 Hewlett-Packard Development Company, L.P. The information contained herein is subject to change without notice



## The Good The Bad The Ugly

(ip)

© Copyright 2014 Hewlett-Packard Development Company, L.P. The information contained herein is subject to change without notic

#### The Good:

We never had such a thorough discussion of technologies going forward towards EC and beyond (with reality checks included)

© Copyright 2014 Hewlett-Packard Development Company, L.P. The information contained herein is subject to change without notice



#### The Bad:

We are still far from a canonical architecture for EC and BEC.
That would be helpful (or mandatory) for more standardized S/W environments

(ip)

© Copyright 2014 Hewlett-Packard Development Company I. P. The information contained herein is subject to change without notice

#### The Ugly

Many discussions ignore that future system architectures have to be "sold" by vendors at a decent margin or the vendor will go out of business or kill the product.

In certain cases the taxpayer will

ackard Development Company, L.P. The information contained herein help without notice.



# Keeping that in mind I see three system categories for EC/BEC:

- 1. General Purpose Heroic Effort Systems (see National / EU Initiatives)
- 2. Special Purpose Systems for Special Apps

(Quantum Computing / Dedicated ASICs etc.)

3. The Exascale Beowulf

(Modular Building Blocks @ ~1 to ~10 PF, compute with electrons, transmit with photons, store with ions et





## Thank you



© Convight 2012 Hewlett-Packard Development Company I. P. The information contained herein is subject to change without notic