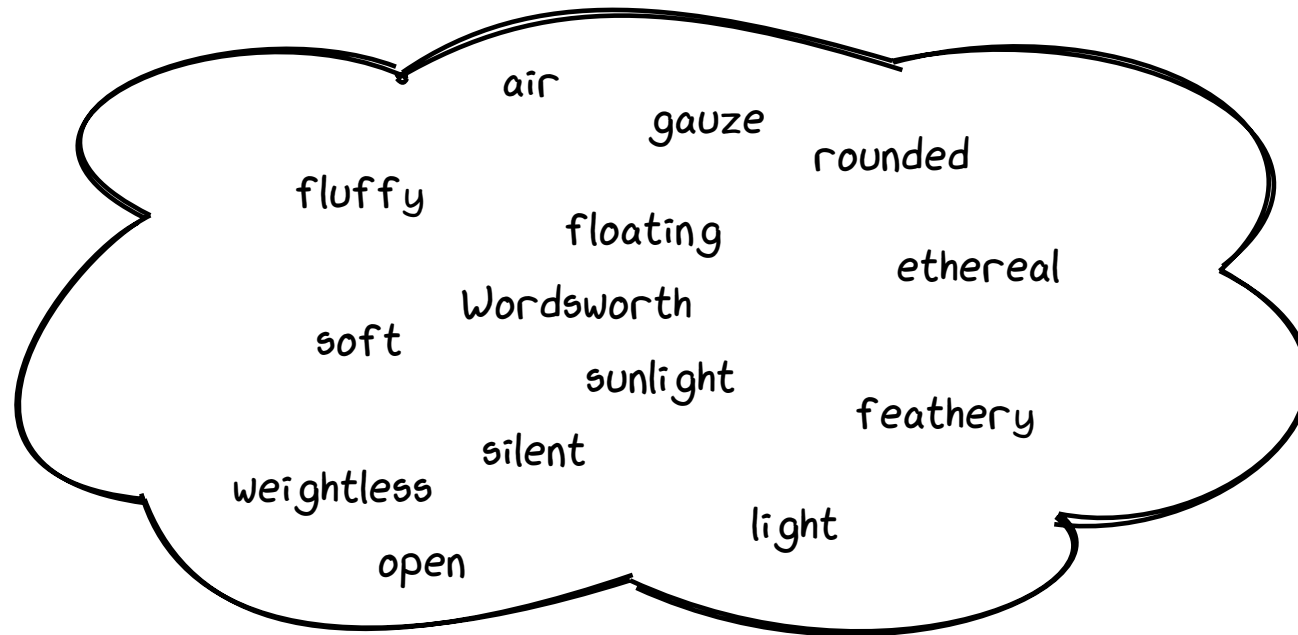


THE BOTTOMLESS DATACENTRE



sustainable cloud computing

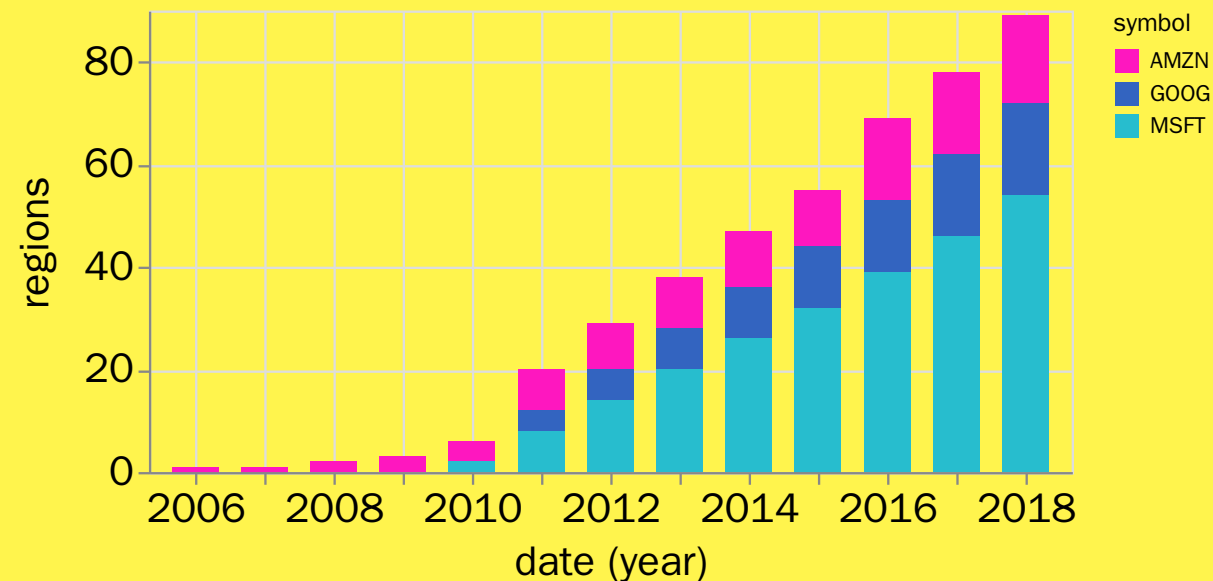
NEWSPEAK



TRANSLATION

barbed wire
cooling fans
rectangular
industrial
warehouse
heavy
security
rows of racks
artificial light
unsightly
physical infrastructure
box
cables
metal
blinkenlights
electric hum

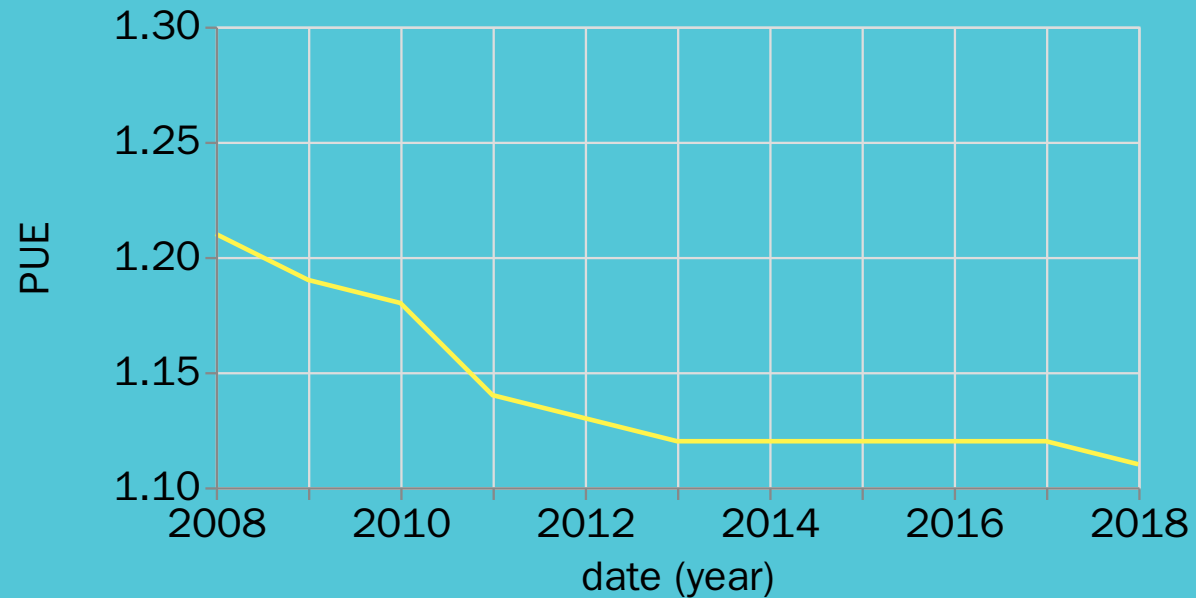
COMPUTE-1 AND UP



Region data based on the [AWS](#), [GCP](#) and [Azure](#) blogs.
Some missing data points interpolated.

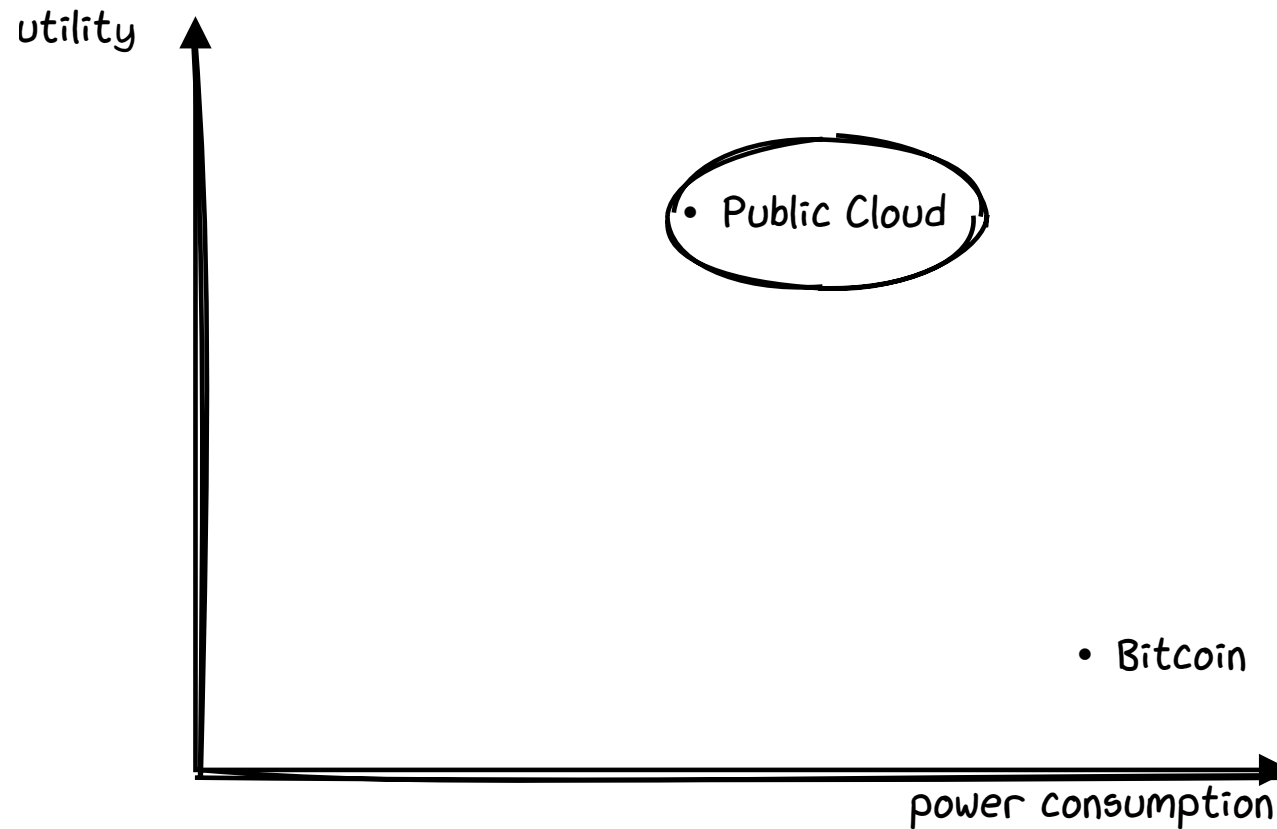
INCENTIVES

$$\text{PUE} = \frac{\text{Watts in}}{\text{IT watts}}$$



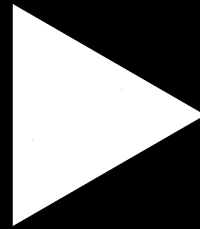
Power usage effectiveness data by [Google Data Centers](#)

ENERGY MIX



PHOENIX CI

bash-4.4\$



00:00



PHOENIX CI

```
FROM golang:1.11.1 as builder
WORKDIR /go/src/github.com/gerald1248/k8s-network-policy-viewer/
COPY * ./
RUN go mod download && go get && go vet go test -v -cover && \
    go build -o k8s-network-policy-viewer .
```

```
FROM ubuntu:18.10
WORKDIR /app/
EXPOSE 8080
COPY --from=builder ../k8s-network-policy-viewer /usr/bin/
USER 1000
CMD ["k8s-network-policy-viewer", "-s=true"]
```


THE MISSING THREE PER CENT

We should forget about small efficiencies,
say about 97% of the time:
premature optimization is the root of all evil

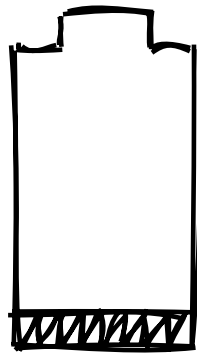
– Donald Knuth (?)

THE VIEW FROM LEMANS

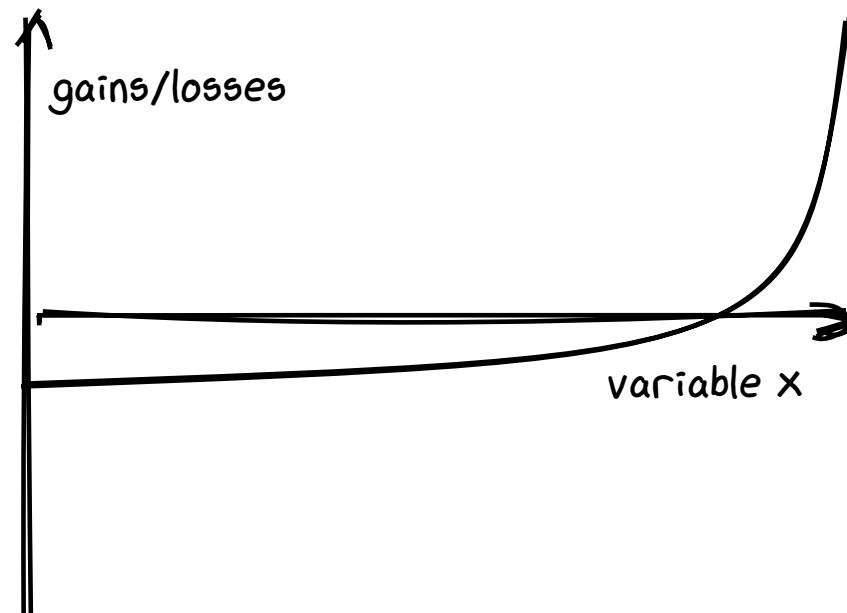
Program to where the performance puck is going to be,
not where it has been

– DHH

MOBILE



CONVEX DISTRIBUTION



See N.N. Taleb. 2012. *Antifragile*. NY: Random House, p. 273.