



Internet Association



# Protecting U.S. Interests Through Encryption

IA's second economic white paper of 2017 examines the impact of encryption on the U.S. economy.  
*Key findings include:*



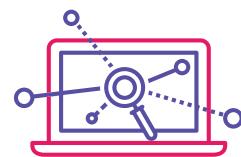
## ENCRYPTION PROTECTS AMERICAN INTERESTS.

Experts all across the spectrum agree that encryption makes us, our data, and our nation safer. Engineering vulnerabilities into products and services makes us less safe.



## THE POTENTIAL FOR DAMAGING SECURITY BREACHES IS INCREASING AT EXPONENTIAL RATES.

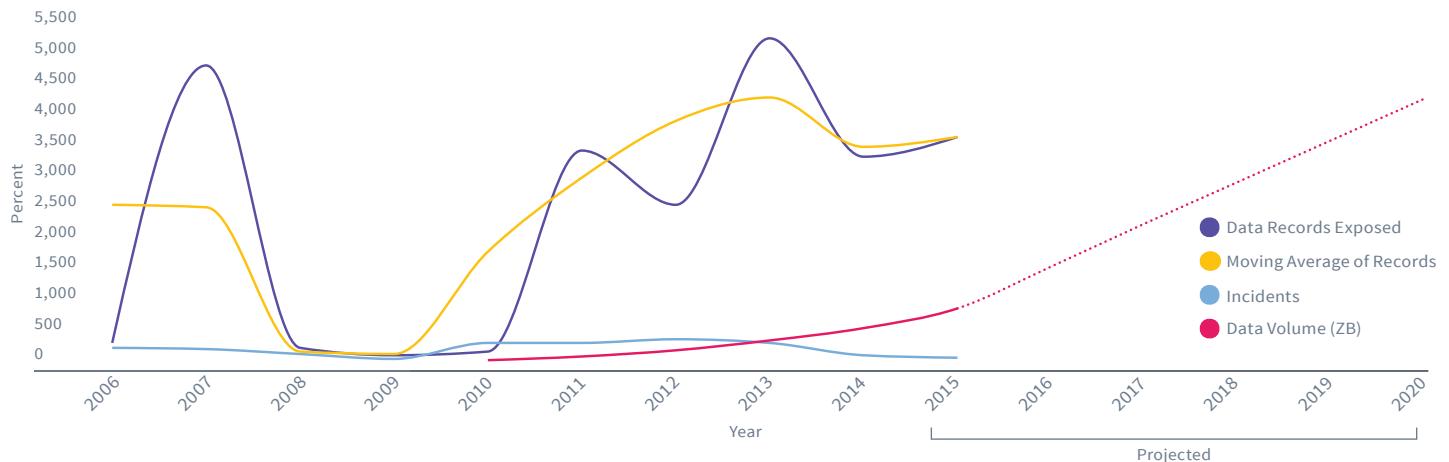
The average annual cost of privacy breaches from 2005-2016 is estimated to be more than \$5.5 billion, with large outlier incidents comprising approximately \$3.4 billion of that total. These numbers are only set to increase.



## UNENCRYPTED DATA IS NOW A THREAT TO EVERY INDUSTRY AND INTERNET USER.

As more and more of our daily lives become integrated into the internet, the risk of a security breach increases both in terms of scope and scale.

### PERCENT GROWTH SINCE 2005



*The real and potential damages of data breaches are growing*



# How does encryption make us safer?

## → PROTECTS DATA AND PRIVACY:

Encrypting data protects consumers, companies, and our government from threats like online fraud, information theft, and attacks on free speech.

## → REDUCES HARM AND MOTIVATION:

Encryption reduces the likelihood of damage – financial and otherwise – from breaches by rendering data useless to potential attackers, reducing the incentives for criminals or other actors to steal it.

## → PROTECTS US FROM STATE-SPONSORED ACTORS:

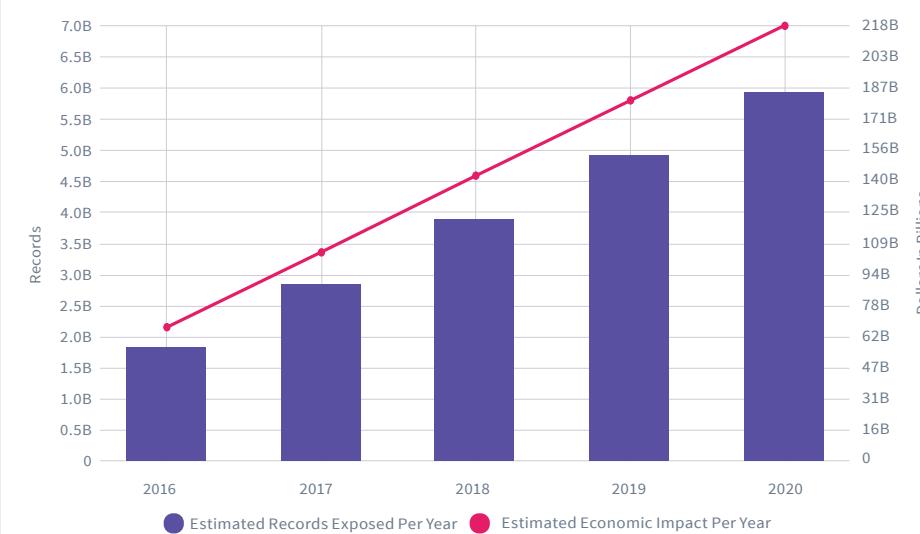
State-sponsored cybercrime is increasingly a threat, especially from China. Many Chinese industries have turned to hacking as a replacement for research and development, calculating that it's cheaper to copy American IP from a hack than to develop their own products.

## → REDUCES THE RISK OF THE MOST DAMAGING SECURITY BREACHES:

While large outlier events constituted only 0.5% of all security breach incidents, they create 80% of the total number of records exposed. Encryption is the best and broadest implementable defense for these breaches.

# AS THE NUMBER OF RECORDS EXPOSED GROWS SO DOES THE POTENTIAL ECONOMIC DAMAGE.

ESTIMATED POTENTIAL RISKS 2016-2020



IA estimates that nearly 6 billion records could be exposed in data security breaches and these breaches would cause almost \$220 billion in damages by 2020

## REFERENCES AND OTHER INFORMATION

The information presented here is from "The Rising Importance Of Strong Encryption For U.S. Interests" by Christopher Hooton, Ph.D., and published by the Internet Association ([www.internetassociation.org](http://www.internetassociation.org)). Research and references can be found in that source document and online.